

## INSIDE DOPE

by GEORGE F. TAUBENECK

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Have We Taken the Fun Out of Buying?

### Story of the Week

Author Betty Smith ("A Tree Grows in Brooklyn") is married to Joe Jones. Normally they sign hotel registers as Mr. and Mrs. Jones, of course. When Betty lectures or is on other "author" business, however, it prevents confusion if they register as Mr. and Mrs. B. Smith.

On a recent trip Betty's husband paused at the hotel desk, turned to his famous wife, and asked, innocently:

"Let's see, are we Mr. and Mrs. Smith tonight, or is it Mr. and Mrs. Jones?"

They had to go to another hotel to get a room.

### Gags of the Week

This chuckle is lifted from *Gas Leaks*, the house organ published by refrigeration wholesaler Frank Hansen in Sydney, Australia, for Lovelocks Ltd:

"Do you know why there are no lady auctioneers? What lady would get in front of a bunch of men and say, 'Now gentlemen, what am I offered?'"

According to Associate Editor Dale Mericle, a caustic Canadian visitor wisecracked, unkindly:

"There'll always be an England—as long as Canada can afford it."

And then he added: "The reason they call her the Mother Country is because she's always expecting."

### Verse of the Week

In infancy he drank his milk,  
As did the others of his ilk.  
Later, when he went to school,  
Ice cream sodas were the rule.  
High school brought him to an age  
With cokes and ginger ale the rage,  
While college found him making merry  
With cocktails, beer, and Tom and Jerry.

In middle age, he'd often buy  
Highballs made with scotch or rye,  
But now that he's an older man,  
He's back to milk where he began!

—LOUISE SHAW, *Wall St. Journal*

### Quote of the Week

"In the course of Edison's 10-year search for a good storage battery, which required 50,000 experiments before success, an assistant tried to console him over the fact that his 8,000 experiments to date had produced no results.

"Results?" countered Edison. "We've got plenty of 'em. We know 8,000 things that won't work!"—*Optimist Magazine*.

### Figures Don't Lie, But Liars Can Figure

Comedian Fred Allen has done us all a good turn by poking fun at the revered Hooper ratings of radio shows. Hooper, as Allen puts it, "makes a couple of phone calls to Cleveland and then he tells you, on the basis of these two phone calls, how many people are listening to the show all over the world."

More "figures" and so-called "surveys" should not all be trusted—even though they're helpful to advertising men in their continuing wrestle with mathematically-conditioned "Brass Hats" for appropriations. So many phony surveys are based on working the sampling technique—interviewing 100 persons and multiplying this "sample" into 100,000—that statistics and surveys can go wrong badly, like Gallup and Roper did when they predicted Dewey would overwhelm Truman.

People whom budget-appropriators assume that they "reach" through (Concluded on Page 12, Column 3)

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## Crosley '50 Sales Double '49; Will Keep Allocations

CINCINNATI—Crosley Div., Avco Mfg. Corp., has announced that its net sales for the year ended Nov. 30 were more than double the volume for the previous year.

Shelvard refrigerators alone this year accounted for more than the total sales volume of all the company's products in fiscal 1949, according to W. A. Bles, Crosley general sales manager.

Substantially higher television sales for November were reported by Bles, despite materials shortages, excise tax, and consumer credit controls.

Allocations of Crosley refrigerators, freezers, ranges, and television sets are still in effect, the company indicated, even though the production of television sets has been tripled and the output of the other three products has been more than doubled.

Bles credited the company's aggressive sales, advertising, and promotion programs with the continuing rise in sales.

## Gibson Refrigerators, Ranges, Freezers Up

GREENVILLE, Mich.—Price increases of approximately 5% on the Gibson lines of refrigerators, ranges, and freezers were announced recently by the Gibson Refrigerator Co. here.

Current increases in steel costs together with advances in the cost of other materials and labor have necessitated the increase, Gibson officials said.

They noted that the company this month has granted a wage increase geared to the recent advance in the cost of living index, in accordance with its contract with the union.

The new refrigerator prices are: model B-701, \$209.95; model B-721, \$239.95; model G-831, \$269.95; model G-941, \$299.95; model G-981, \$329.95; model G-1101, \$339.95; model G-1111, \$349.95; model G-1131, \$399.95; and model G-1151, \$429.95.

New range prices are: model A-3, \$169.95; model A-4, \$179.95; model C, \$214.95; model D, \$274.95; model (Concluded on Page 25, Column 5)

## Livar, Jacobs Get Key Posts at Warren Co.

ATLANTA — Virgil P. Warren, president and chairman of the board of The Warren Co., Inc., has announced the election of Allen P. Livar to the board of directors and to the position of vice president and the appointment of Roger D. Jacobs, secretary of the firm, as general sales manager.

Livar, who assumes complete charge of manufacturing, attended the Georgia Institute of Technology, where he received his B.S.M.E. degree. He began his career in heating and air conditioning with American Radiator Co. in 1920.

Later, he joined the Trane Co., becoming its eastern sales supervisor and consulting field engineer. He resigned from this position to accept the vice presidency of Richmond Radiator Co., in charge of engineering and sales. This firm was later purchased by Reynolds Metals Co., with whom Livar remained as sales engineer of the air conditioning division.

In 1934, Livar joined the Airtemp (Concluded on Back Page, Column 3)

## Output of Copper Products May Be Hit As NPA Also Orders Nickel, Zinc Cutbacks

WASHINGTON, D. C.—Greater curtailment in civilian production than previously indicated loomed last week as the National Production Authority:

1. Hinted that it may issue an order limiting the production of products containing copper, and that it may ban the use of scarce metals in "non-essential" goods.

2. Ordered a 35% cutback in consumption of primary nickel for non-defense purposes during the first half of 1951, and a 20% reduction in civilian production and use of zinc products beginning Jan. 1.

At the same time, the NPA relaxed temporarily its previous aluminum cutback order. The original order called for a 35% reduction in non-defense consumption of the metal during the first six months of 1951. As amended, the order provides for a 20% cutback in January and a 25% reduction in February. No change was made for the following months.

The agency also revised its steel orders so that non-integrated steel mills will get an equitable share of steel from integrated mills after rated orders and NPA directives are filled. The NPA said this provision was added "because non-integrated steel mills furnish a considerable tonnage to steel warehouses on which many small business firms depend for their steel supply."

No decision had been reached by mid-week on what products using scarce metals—such as aluminum, copper, nickel, and cobalt—would be listed as "non-essential" and thus deserving no supplies of these metals.

The NPA was reported working on a "scale of essentiality" which would provide the answer.

Appliances are not expected to be affected by such an order for several months, barring all-out war. Only "fringe" items such as toys and ashtrays would be covered at first, it was believed. NPA officials said they were aware of the widespread dislocation and layoffs that direct cutbacks in output of appliances and automobiles might cause.

Regarding possible limitation of the production of products containing copper, an NPA official was quoted as saying that the agency is considering either prohibiting the output of many "non-essential" copper goods or restricting the number of products containing copper which any manufacturer may produce.

The nickel order (M-14) limits all consumption of primary nickel for non-defense purposes during the first quarter of 1951—except for maintenance, repair, and operating supplies—at 65% of the average quarterly consumption during the first six months of 1950.

The following forms of primary nickel are covered by the order: electrolytic nickel, ingots, pig, rolled and cast anodes, shot, oxides, and residues derived directly from new nickel.

Persons who use less than 250 pounds of primary nickel during a calendar quarter are exempt from the order, which also limits inventories of users.

The zinc order (M-15) permits the non-defense production and use of zinc products at an average (Concluded on Back Page, Column 1)

## Speakers Are Listed For NARDA Meeting

CHICAGO—The National Appliance and Radio Dealers Association has announced that its annual meeting will be held Jan. 14-17 at the Stevens hotel here.

Arranged to cover urgent dealer problems, the program will consist mainly of talks by industry leaders and panel discussions. Also planned are a NARDA Service Equipment Show, entertainment, and a ladies program.

Speakers lined up so far include H. L. Clary, vice president and director of sales of Norge; Ward Schafer, vice president and general manager of The Coolerator Co.; Bob Wilson, general sales manager of Thor Corp.; and Charles Rippe, sales director of Hamilton Mfg. Co.'s Home Appliance Div.

Also scheduled to speak are Walter J. Daily, manager of the Vacuum Cleaner Div. of Lewyt Corp.; Julius Klein, vice president of Caloric Stove Corp.; H. C. Bonfig, vice president of (Concluded on Back Page, Column 2)

## L. O. Bower To Head New Sherer Mfg., Sales Setup

MARSHALL, Mich.—J. H. Coolidge, president of Sherer-Gillett Co. has announced that, in a move to streamline the company's regular sales and manufacturing program, L. O. Bower, vice president, will direct all phases of sales planning, engineering, advertising, and product costs.

The move will, at the same time, permit more thorough adaptation of the company's manufacturing facilities to the defense program, Coolidge said.

Bower joined the company in 1943 and became vice president in 1947. In 1949, he became a director of the company.

Coolidge further announced that John S. Twist has been promoted to sales manager of the company and will supervise sales activities of the company's domestic distributors.

Graduated from Michigan State college in 1941, Twist at once was called to active duty and assigned (Concluded on Page 25, Column 5)

## Form Durables Unit To Aid In Price Control

### Price Stabilizer To Try Voluntary Program First, Has No Enforcement Staff

WASHINGTON, D. C.—A consumer durable goods industry advisory committee is being formed as one of seven industrial committees to consult with the Economic Stabilization Agency on how price and wage controls should be imposed and administered, Alan Valentine, director of the E.S.A. declared last week.

He pointed out, however, that the E.S.A. might have to move so quickly in imposing controls that consultation with these committees before the action might not be possible.

Michael V. DiSalle, appointed as director of price stabilization by President Truman, told the Senate committee that recommended confirmation of his appointment, "It will be necessary to start with a voluntary program (of price controls). You can't have a compulsory program without a staff to enforce it."

No government official would say how soon price controls would be imposed, although the consensus was that it was a matter of "when" and not "if."

DiSalle told the committee, "We'll do everything possible as quickly as possible to get things stabilized."

Valentine said that the country is nearing a point where prices and wages will be in balance on a "general plateau" and when that point is reached, we must hold it.

Valentine also stated, "It is my understanding that when we act on prices, we act on wages." He believed that action on prices would have to precede action on wages.

Indications are that the E.S.A. will at first try to "talk down" prices. Already it has approached the automobile industry in an attempt to keep auto makers from proceeding with plans to raise prices.

One outside report declared that the appointment of an executive for price control indicated to industrialists that billions of dollars of defense orders would be released soon.

The report added that prices of civilian materials are expected to be controlled to prevent inflation in defense production costs.

Appointed as a special assistant to Valentine is J. Darrell Harvey, assistant to the vice president for sales and engineering of the International General Electric Co. His duties in his new post have not yet been revealed.

## Kelvinator Recalls 4,000 Workers To Mich. Plants

DETROIT—Nearly 4,000 employees will be called back to work Monday, Dec. 11, at the Grand Rapids and Detroit plants of Nash-Kelvinator Corp., R. A. DeVlieg, vice president in charge of manufacturing, announced last week.

Production of Kelvinator refrigerators and ranges was cut off Nov. 22 by steel shortages. When production is resumed Monday, the plant will start building 1951 Kelvinator models. This fact, coupled with continued shortage of materials, will make it impossible to get up to previous output levels for some time, DeVlieg said.

## NEMA Survey Aims To Find Out:

### Why Do Rural Customers Prefer One Dealer over Another?

ATLANTIC CITY, N. J.—What are the "ingredients" of successful rural electrical dealers?

Are they liked more personally than some of their less successful contemporaries? Or can the answer be found in more tangible reasons—such as efficient service departments, convenient location of sales outlets, and adequate stock of electrical equipment?

Information on these and a host of other pertinent problems will be sought of thousands of farmers early next year in a comprehensive nationwide survey to be sponsored by the

farm sales and service information subcommittee of the NEMA Farm and Rural Market Development Committee.

Plans for the study were announced here by Subcommittee Chairman R. A. Demmer at the conclusion of discussions held in connection with the annual NEMA meeting.

The survey is being undertaken in order to provide those NEMA members interested in the farm and rural market with data which will enable them to serve their farm customers effectively.

Typical of the questions to be asked are the following:

From what type of dealer (hardware, power supplier, mail order house, farm cooperative, electrical contractor dealer, etc.) did you make your last electrical purchase?

In what size town is this dealer located; how many miles is he from your home, and is the location satisfactory?

Is the dealer from whom you can buy your electrical equipment, the nearest one to your home?

Why do you prefer to buy from (Concluded on Page 25, Column 3)

## Andrews of G-E Explains Factors Involved In Expected 25-30% Drop In Appl. Demand

NEW YORK CITY—Consumer demand for large electrical appliances may be 25 to 30% lower in 1951 than in 1950, H. L. Andrews, vice president in charge of the General Electric Appliance & Merchandise Department, told his company's 60 major appliance distributors meeting here recently.

The drop in demand closely parallels the drop in production anticipated as a result of government orders curtailing the use of strategic materials for non-essential purposes, he said.

Nevertheless, he said that "even with government controls, 1951 looks like a good appliance year in units and dollar volume—a year about like 1949, which surely was a good year."

Reporting the findings of General Electric economists, Andrews said that "factors tending to maintain or increase demand for appliances in 1951 are the expected higher level of employment, higher wages, and longer hours of work—all adding up to a disposable income that should be a little higher in 1951 than in the current year. Also on the plus side are equal or increased expenditures for advertising and promotion."

"Negative factors applicable to demand in 1951 are higher taxes and prices, increased restrictions on credit, and the drop in residential construction."

Because of the greater strength of the negative factors, the appliance industry next year may not have the easy time it had in 1950, Andrews

said. He continued:

"In addition to reduced consumer demand, conversion to war work can cause severe dislocation and bring spotty but substantial industrial unemployment. Prices for consumer durables can go higher if the cost of materials and labor continue to rise."

"These price rises—when taken together with more rigid credit terms and stiffer taxes—can cause buyers to stay out of the market in droves. Government pressure to drain off spendable income into savings bonds is also a deterrent."

"To meet this challenge, we are going to maintain our advertising and sales promotion efforts and have no thought of reducing them in 1951. And we hope that distributors and dealers will gear their efforts accordingly and even increase the tempo of their selling pace. Because the industry may find that it has a real selling job to do—even with less merchandise available. This is particularly true of the newer appliance lines."

Reviewing the production picture for 1951, Andrews said the availability of copper would determine the number of appliances that can be produced.

He said the recent modification of the government's aluminum order—permitting in December 100% use of aluminum used in October and November of this year—is very helpful in preventing mass layoffs at this time. The recognition in the

modified order of changes in product design will also help a great deal.

General Electric and industry generally, Andrews said, will "of course try to get substitutes for aluminum and all other scarce metals and will use them wherever this does not affect the quality of our products." He predicted that in many cases these efforts would be successful, but pointed out that in the appliance business there is no satisfactory substitute for copper.

He concluded from these developments that "we shall probably not be forced to discontinue the production of any appliance line or other civilian lines, but we can reasonably assume a reduction in units produced."

Major appliance output in 1951, he said, would be about 98% of output in 1949.

## Contractors In Northeast Texas Get Anti-Trust Fine

DALLAS—The Northeast Texas chapter of the National Electrical Contractors Association drew a \$5,000 fine after a federal court jury found it, and eight top officers, guilty of anti-trust law violations.

Federal District Judge T. Whitfield Davidson assessed Lawrence Martin and F. H. Gables, association top officers, fines of \$2,500 each. Six other officers received \$500 fines each.

In passing sentence the judge noted that evidence showed officers of the association had informed electrical wholesalers that they should buy for association friends or their fixtures would not be sold. He said this was restraint of trade.

## NEMA Refrigerator Sales For 9 Mos. by States

### SALES OF ELECTRIC HOUSEHOLD REFRIGERATORS BY DISTRIBUTORS & DEALERS—BY STATES

Reports were received from 13 companies. Summary for First Nine Months

STATES	UNIT SALES
Alabama	79,626
Arizona	20,913
Arkansas	64,287
California	288,217
Colorado	43,119
Connecticut	44,602
Delaware	9,173
District of Columbia	51,122
Florida	99,629
Georgia	94,986
Idaho	13,314
Illinois	192,489
Indiana	99,948
Iowa	73,728
Kansas	46,203
Kentucky	70,536
Louisiana	80,856
Maine	24,744
Maryland	56,996
Massachusetts	104,788
Michigan	145,471
Minnesota	75,023
Mississippi	53,159
Missouri	140,761
Montana	12,584
Nebraska	43,852
Nevada	5,422
New Hampshire	13,978
New Jersey	130,366
New Mexico	14,580
New York	373,520
North Carolina	115,570
North Dakota	18,341
Ohio	188,625
Oklahoma	72,576
Oregon	42,554
Pennsylvania	258,072
Rhode Island	31,860
South Carolina	54,078
South Dakota	18,448
Tennessee	117,483
Texas	270,341
Utah	18,545
Vermont	7,439
Virginia	68,841
Washington	50,008
West Virginia	56,974
Wisconsin	78,406
Wyoming	5,679
<b>TOTAL UNITED STATES</b>	<b>4,041,822</b>

Participating companies: Admiral Corp.; Avco Mfg. Corp.; Coolerator Co., The; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co. (In 2-1-50); Norge Div., Borg-Warner Corp.; Refrigeration Div., Philco Corp. (In 8-1-50); Westinghouse Electric Corp.

## Dairy Equipment Group Plans 'Essentiality' Campaign

CHICAGO — Representatives of more than 50 dairy processing equipment manufacturing companies approved a program for establishing recognition among government officials of the essentiality of dairy processing equipment, at a recent meeting here.

Methods for developing constructive and productive collaboration between the dairy processing equipment industry and defense officials were also discussed. The meeting was one phase of an extensive program planned by a Committee on Essentiality of Dairy Processing Equipment of Dairy Industries Supply Association.

## Eastern Snows Cut Sales Of Nation's Dept. Stores

WASHINGTON, D. C. — Sharp sales drops in the snow-shrouded eastern states during the week ending Nov. 25 sent the national average of department store sales for that week tumbling 3% under the corresponding week last year, figures released by the Federal Reserve Board indicated recently.

Sales in the Cleveland Federal Reserve district fell 20% below the same week last year, while New York district sales dropped 12%, Philadelphia district 10%, Richmond district 5%, and Boston district 4%.

All other Federal Reserve districts around the country, with the exception of the St. Louis district (down 1%) showed sales gains over the corresponding week in 1949. San Francisco district sales were reported up 9%, Dallas 8%, Kansas City 6%, Atlanta 5%, Chicago 3%, and Minneapolis 2%.

The 3% national sales drop contrasted with an 8% rise in the preceding week. For the year through Nov. 25, sales were 5% ahead of the corresponding 1949 period.

## 'High Point' Deer Processed Free In Locker Contest

NIAGARA FALLS, N. Y. — To attract locker business from deer hunters during the November deer season, The Niagara Falls Food Services, Inc., 227 Tenth St., conducted a contest open to all hunters.

The marksman bringing in the deer with the most points received a complete job of processing free of charge.

The locker firm launched the promotion with a newspaper advertisement which read: "To patronize our locker plant, assurance is given you that your venison will serve you many months to come because of our careful dressing, chilling, cutting, and wrapping. There are still lockers available for your game, by the month or year."

## President of Denver Firm Dies

DENVER — Sam Nides, founder and president of the Nides Corp., which operates two stores here under the name of Nides General Electric Appliance Co., died recently at the age of 56. He had been ill for the past four months.

## Cooling for Even 'Oldest' Cafe

ST. PETERSBURG, Fla. — The Dixie cafeteria, 551 First Ave., N., which professes to be the oldest cafeteria in St. Petersburg, has been completely air conditioned for summer and winter comfort, with the intention of staying open the year-round.

**Watch** your customers brighten when they spot Brewer-Titchener's new DC-10 Display Case. They've never seen a small case with so much sales appeal — and, for that fact, neither have you!

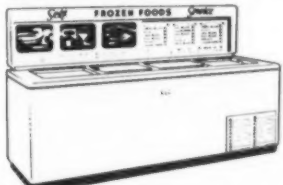


MODEL DC-10  
Available with or without superstructure.

**This new BTC case turns a little space into a LOT of profit...**



SMART-LOOKING 16 Cubic Foot Display Case. Model DC-16. 76" x 28". With or without superstructure.



ROOMY 22 1/2 Cubic Foot Display Case. Model DC-23. 96 1/2" x 28". With or without superstructure.

**SO MUCH STORAGE SPACE** in such a small cabinet... holds a full 10 cubic feet in a floor area only 55 1/2 by 20 inches!

**SO GOOD-LOOKING TOO** with its gleaming-white finish and stainless steel top trim... an eye-catcher in any store!

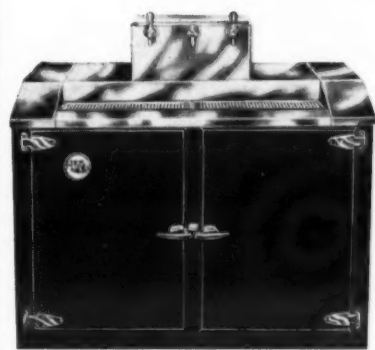
**PLUS ALL THESE BTC FEATURES**... all-steel Bonderized cabinet, vapor-sealed insulation, Thermopane glass sliding lids, capillary expansion, lateral-plate evaporator, and a five-year compressor and food spoilage warranty. Write Brewer-Titchener today for the full story on the new DC-10, as well as on these other fine new cases!



**DISPLAY CASES**

THE BREWER-TITCHENER CORPORATION, Binghamton, New York

## WASTED BEER? LOST PROFITS?



**NOT WITH LA CROSSE DIRECT DRAW EQUIPMENT**

**REFRIGERATED FAUCETS KEEP BEER AT IDEAL TEMPERATURE FROM KEG TO GLASS!**

**AT NO EXTRA COST**

Positive continuous refrigeration right up through the faucet keeps beer at the proper temperature... No more wasteful excessive foam, morning draw-off, etc.;... You save those wasted expected of ordinary draw equipment.

**THIS PRODUCT SELLS—INVESTIGATE!**

**LA CROSSE COOLER COMPANY**

2809-17 Losey Blvd., So. La Crosse, Wisconsin

Export Representatives: Melvin Pine & Co., 80 Broad St., New York, N. Y.  
Cable Address: Eximport.



# *Congratulations* to a very successful man... the Frigidaire Dealer!

**Frigidaire Dealers have made this a record-smashing sales year all across the board — for Frigidaire Appliances, Commercial Refrigeration, and Air Conditioning.**


**T**HIS Christmas season signals the close of the biggest year Frigidaire Dealers everywhere have ever had, and will mark a high point in their success.

During 1950, Frigidaire Dealers shattered previous sales records in all classifications — Home Appliances, Commercial Refrigeration, and Air Conditioning!

The popularity of Frigidaire's famous service parts

also reached a new high during this year. So much so, in fact, that deliveries have been temporarily slowed down. But this will soon be remedied.

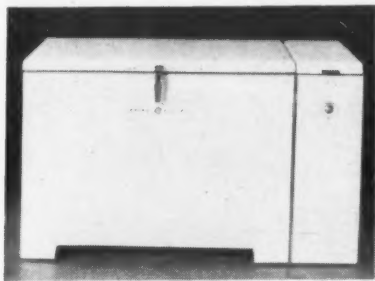
To the thousands of successful Frigidaire Dealers, salesmen and service men responsible for this great year — our warmest greetings, our sincere thanks, and our best wishes for the New Year.

FRIGIDAIRE DIVISION OF GENERAL MOTORS 



ACROSS-TOP freezing compartment in G-E's new LF-10 refrigerator holds 49 pounds of frozen foods.

BUILT-IN, heated salt conditioner in G-E's new Liberator range keeps salt free-flowing.



RESTYLED G-E 11-cu. ft. food freezer.

\$139.95. (The company will continue to produce its deluxe automatic washer, the AW-6A8.)

Dishwasher: UC-110, \$299.95.  
Automatic ironer: AF-20A, \$249.95. Rotary ironers: AR-20C, \$219.95; AR-70, \$189.95; AR-60, \$159.95; AR-50, \$119.95; AR-30, \$59.95.

#### 7 RANGE MODELS

J. R. Poteat, manager of the range and water heater divisions, said the range line will comprise a new medium-price push-button range, two deluxe push-button models, two standard ranges, and two apartment house models.

All the full-size models are finished in titanium enamel and feature the extra hi-speed surface cooking unit which was introduced last year on the company's deluxe models. This 6-in. unit is said to permit an exceptionally fast cooking start, but at the cook position, to allow for controlled heat.

The new double-oven Liberator has a higher backsplash with a full-width fluorescent lamp that lights the entire cooking surface. Salt and pepper shakers are recessed in the backsplash and are slightly tilted

so they can be easily removed or replaced.

A small heater keeps the salt dry. The shakers are of different size so that each fits snugly only in its particular recess.

In addition to these features, the Liberator incorporates two giant surface units, Tel-A-Cook lights, roller bearing storage drawers, and other deluxe accessories.

The new Stratoliner has a built-in pressure cooker and a raisable unit in the deep-well position. The push-button switches are lighted to show which unit is on and at what speed. The large triple-oven can be used for capacity baking or converted to a fast speed oven for economical baking of smaller quantities of food.

The third push-button range, the Airliner, incorporates white plastic push-button controls on a chrome panel at the top of the backsplash. Immediately below are oven controls, clock, and appliance outlets. At the opposite side of the backsplash are a built-in lamp and name plate. This model also has the deep well unit.

Two standard ranges, the Stewardess and Leader, are equipped with rotary switches and full capacity ovens. The Stewardess has three storage drawers; the Leader has one drawer and a new flush front construction. Lamp and timer accessories are available for both models.

The two apartment house models—A21 and A41—come with either three or four surface units. Model A21 has three units.

#### NEW WASHER DESCRIBED

According to C. E. Anderson, manager of the home laundry equipment division, the new automatic washer is a top-loading machine with agitator action. Once started, it will automatically wash, rinse, and spin dry a load of clothes and then shut itself off.

To assure complete cleaning of clothes, the wash cycle is followed by two rinses—a "suds-kill" and flush rinse followed by a deep agitated rinse.

The washer is driven by a 1/4-hp. motor connected by a belt to a sealed-in transmission that reportedly never requires oiling. A "positive washer fill" mechanism is claimed to make it impossible for washing to begin until the tub is filled with the right amount of water.

Three new wringer washers have been completely restyled.

The deluxe model, designated the AW462, will hold a load of 10 pounds of dry clothes and 19 gals. of water and has an "instinctive" wringer. When the wringer is in operation, a slight push or pull on it or a slight tug on clothes going through it will instantly stop the roll.

The washer also has a timer which automatically regulates washing time for up to 15 minutes.

The other new wringer washers are the AW362, which also features a timer, and the AW162. Both have a capacity of eight pounds of dry clothes.

The new dishwasher is claimed to wash and dry up to 100 pieces of china, glassware, and cutlery in 30 minutes.

The dishwasher will fit under any

standard kitchen counter. According to C. J. Enderle, manager of the electric sink and cabinet division, it eliminates the necessity of stooping to load and unload dishes and at the same time makes possible an unbroken counter space because it slides out from under the counter on ball-bearing rollers on an extension slide.

All the housewife has to do is slide the dishwasher out, load the racks with dishes, fill the detergent cup, slide the machine under the counter, and turn the control, Enderle said. The dishwasher automatically washes, double-rinses, and dries the dishes.

A preliminary power rinse preheats dishes and washes off loose food particles missed in scraping. Dishes are then washed in a detergent solution kept hot by an electric heating unit in the tub and are double-rinsed in complete changes of hot water.

#### AIR FAN-CIRCULATED

The dishes are dried by air which passes over the heating element and is fan-circulated throughout the dishwasher.

Enderle said the company will continue to produce its top-opening dishwashers, including a complete 48-in. dishwasher-sink combination, a 24-in. free-standing unit, and a chassis unit that can be dropped into any counter space.

The new automatic ironer, completely controlled by toe pressure, is said to make ironing a "no hands" operation for the housewife. The homemaker, sitting down to iron, has only to adjust the garment on the ironer, gently press the automatic foot control and, when the garment is finished, remove it from the ironing surface, it was explained.

When the foot pedal is pressed down, the ironer shoe swings into ironing position and lifts the ironing surface against the shoe. When the pedal is released, the shoe glides back from the ironing surface to allow the user to remove or adjust the ironed fabric.

Because pressure exerted by the ironer shoe is hydraulically controlled, the same pressure is provided for all materials, regardless of thickness, it is claimed. The mechanism also provides instant release of pressure in case of power failure.

The company also has a complete line of rotary ironers, including a deluxe automatic rotary ironer, designated the AR-20C, with controls for either knee or hand operation to start and stop the roll.

## G-E Bows '51 Range, Washer, Ironer Lines, Front-Opening, Top-Loading Dishwasher

BRIDGEPORT, Conn. — General Electric Co. has announced its 1951 line of ranges, a new line of washers, a complete line of ironers, and a new front-opening, top-loading, fully-automatic dishwasher.

A new double-oven model with push-button controls and a built-in, electrically-heated salt conditioner to keep that seasoning free flowing heads the range line. The washer line includes a lower price automatic model and several redesigned wringer washers.

In the ironer line is a new

"toe-touch" automatic model and several rotary ironers.

Details on G-E's 1951 refrigerators and food freezers were published in the Dec. 4 issue of the NEWS.

Recommended national retail prices of the appliances are as follows:

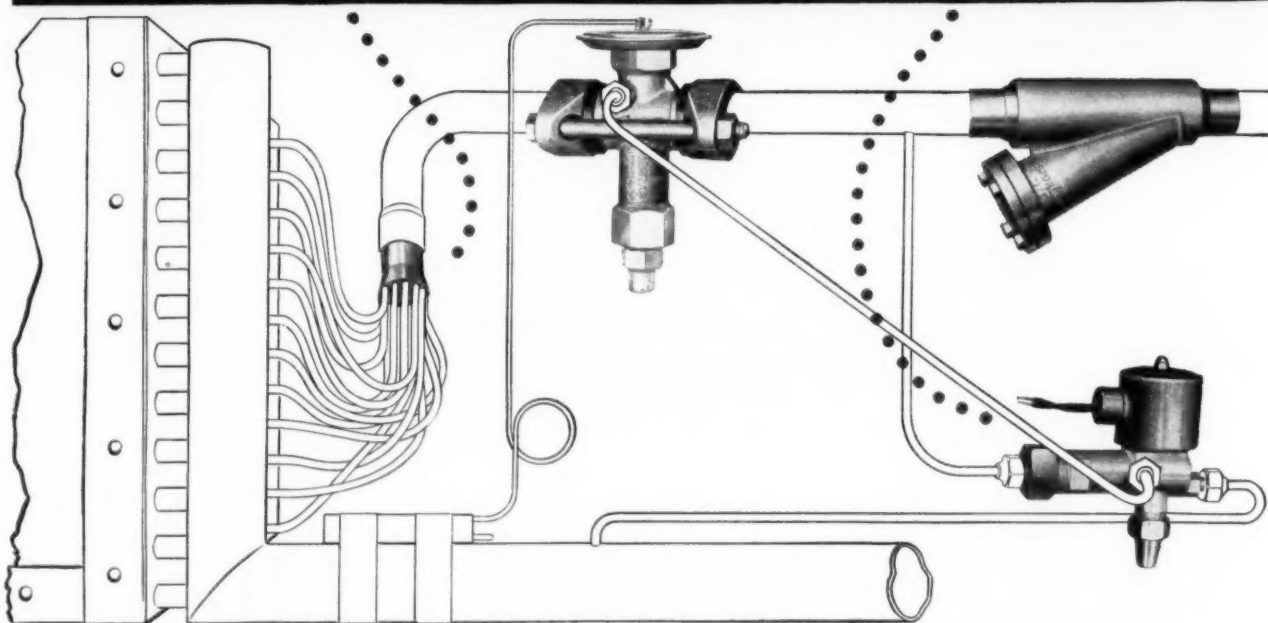
Standard-size ranges: Liberator, \$449.95; Stratoliner, \$389.95; Airliner, \$289.95; Stewardess, \$229.95; Leader, \$209.95. Apartment house models: A21, \$169.95; A41, \$179.95.

Automatic washer: AW5-B4, \$329.95. Wringer washers: AW-462, \$179.95; AW-362, \$149.95; AW-162,

# SPORLAN AIR-CONDITIONING CONTROLS

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EFFICIENCY PEAK PERFORMANCE ECONOMY



#### REFRIGERANT DISTRIBUTORS

- Economical to Install
- Assures Equal Distribution
- Capacity Balanced to Load by Means of Interchangeable Nozzle
- Available as Separate Device to Permit Use of Standard Valves
- Provides Maximum Coil Efficiency

#### THERMOSTATIC EXPANSION VALVES

- Flare, Sweat or Flange Connections
  - All Parts Accessible for Cleaning or Inspection
  - From 1/2 to 50 Tons Freon
- The Only Thermostatic Expansion Valves with Selective Charges

**SPORLAN**

#### SOLENOID PILOT CONTROL

- Tighter Closing than Ordinary Solenoid Valves
- Economical to Install
- One Size Fits All Jobs
- Costs No More than a Ten Ton Solenoid Valve Regardless of Load
- Positive Liquid Line Shutoff

#### STRAINERS

- A Complete Line for All Purposes

**SPORLAN VALVE COMPANY**

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#### WE HAVE IT!

the only automatic ice cuber that makes round, clear, solid ice cubes

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Finest Food Stores!



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...ONE OF 62 DIFFERENT  
BALLY MODELS and SIZES

**Bally**

REFRIGERATED DISPLAY CASES  
Bally Case and Cooler Co., Bally, Pa.



Twenty brands of beer are displayed in this big refrigerator, a feature of Skyway Liquors' new \$25,000 store in Colorado. The box can hold 200 cases of beer.

## Big Display Box Credited For Soaring Beer Sales

DENVER—Beer sales at the new \$5,000 store of Skyway Liquors here are more than five times those of the concern's former store. Most of the credit for this increase is given to a custom-built display refrigerator that can readily accommodate 200 cases of beer.

The refrigerator is one of the largest of its kind in Colorado package liquor merchandising history. Built at a cost of \$2,200 by Ludwig-Patterson Co., local commercial refrigeration firm, it measures 10 ft. by 8 ft.

The box is finished in primavera hardwood and has six large doors which permit good visibility into the interior, six tiers of shelving also constructed of primavera wood, and heavy chromium hardware. It is cooled to from 36 to 38° by a 1½-hp. condensing unit.

## Lift 'W' Rules on Credit In Two Storm-Hit Areas

NEW YORK CITY—To meet the emergency created by the storm of Nov. 25 in the New York area, the Federal Reserve Bank of New York has exempted from the provisions of Regulation W any extension of credit to finance the repair and replacement of real and personal property damaged or lost as a result of the storm.

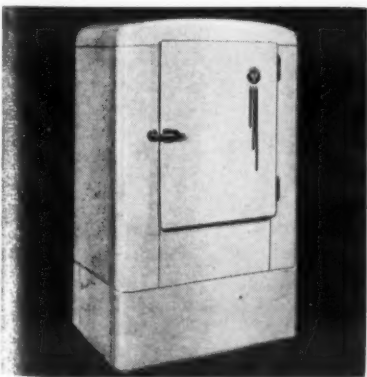
Similar action was taken by the Federal Reserve Bank at Philadelphia.

The exemption applies throughout the second Federal Reserve district which comprises the state of New York, Fairfield county, Conn., and 12 northern counties in New Jersey.

To qualify, the extension must be made prior to May 31, 1951 and must be for a purpose directly attributable to the storm.

"In order to establish that an extension of credit qualifies for the exemption, dealers and lenders should obtain from the obligor his written statement setting forth the nature and extent of the damage or loss sustained, and that the credit is to be used for the purpose of repairing or replacing real or personal property damaged or lost as a result of the storm," the bank's announcement declared.

Count these **BENBAR** features! They add up to **MORE SALES!**



- Hermetically sealed condensing unit
- Panelyte covered door jams—Frost breaking lock
- Trouble free capillary system
- Two step door construction
- 4" fiberglass insulation

Sell the kind of freezer that all America is demanding. 2 standard sizes—14 and 17 cu. ft.

**DISTRIBUTORSHIPS NOW AVAILABLE**

Write for full information regarding opportunities.

**AUGUST G. BARKOW MANUFACTURING CO.**

2230 S. 43rd St., Milwaukee 15, Wis.

## Electrical Leagues Ponder Ways of Assisting Dealers, Contractors In Time of Shortages

BOSTON — What can electrical leagues do to aid retailers and contractors if shortages of appliances and equipment occur?

That question came up for discussion during the 15th annual conference of the International Association of Electrical Leagues. Some of the suggestions were:

Sponsor educational programs, including displays and demonstrations, for consumers to help maintain their desire for electrical appliances.

Continue to conduct sales training programs so salesmen will keep selling techniques fresh in their minds and so able replacements will be available for those leaving the field for the military services and war production.

Put increased emphasis on service.

Maintain lists of sources of supply for various items to assist those

whose regular sources may not be able to supply them.

Offer electrical living courses for home economics teachers (such as is now being done on the West Coast).

Services rendered in the last war that could be offered again also were discussed. These included:

Maintenance of appliance and spare parts exchange lists.

Maintenance of lists of companies (and key personnel) from whom important community centers could obtain supplies and services in case of emergency.

Distribution of information for consumers on how to keep their electrical equipment in good condition.

Analysis and circulation of pertinent government regulations.

Sponsorship of training courses for servicemen and seeking defer-

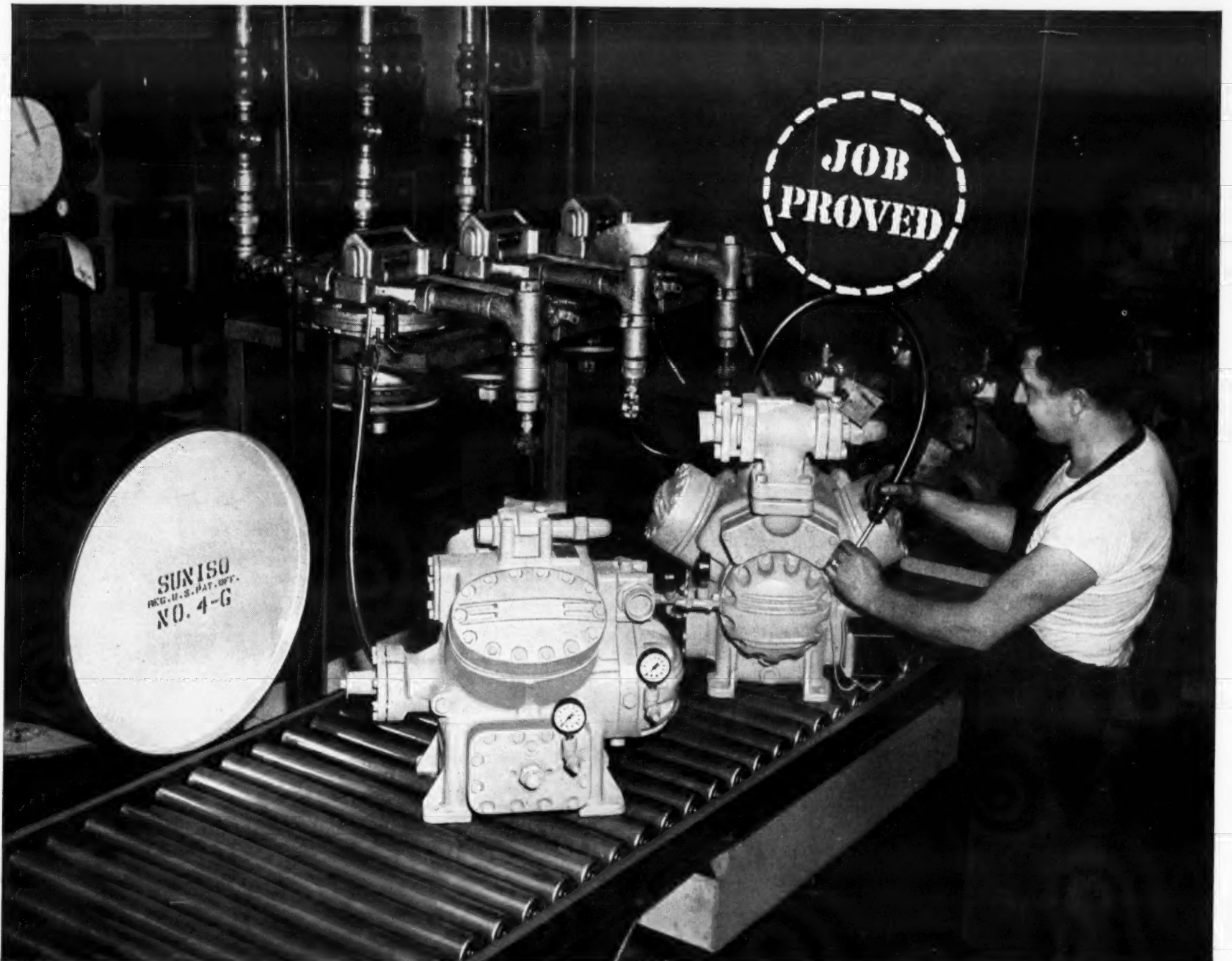
ment of experienced servicemen.

It was suggested that publication of lists of new products available from the electrical industry could help other industries keep operating at peak efficiency.

Other open-forum discussion topics were electrical shows, securing new members and keeping old ones, building attendance at meetings, promoting complete electric kitchens vs. adequate wiring, TV Town Hall meetings, residential Christmas lighting, selling the complete automatic laundry, selling room coolers as "plug-in" devices, the influence of a league wiring specialist on contractors, and successful rewiring programs.

## Plan Cooling for 3-Story Bldg.

ST. LOUIS—The three-story building at 913 Locust St. was purchased for an indicated \$95,000 recently by St. Louis Federal Savings & Loan Association for future use as its headquarters. The entire building will be air conditioned.



## SUNISO ENDS LOW-TEMPERATURE WAXING

Six Years' Service Experience Backs Up  
Manufacturer's Laboratory Findings

Important development six years ago was the large-scale shift to low-temperature units. Big problem for equipment makers, though, was finding a refrigeration oil that wouldn't wax at subzero temperatures.

Convinced that his present oil was "waxing out" at low temperatures, one prominent manufacturer of refrigeration and air conditioning compressors determined to test all available oils. Exhaustive labo-

ratory analyses soon narrowed the field to Suniso. Further tests proved beyond a doubt that when used with Freon, Suniso has a lower wax separation point than any other oil. As a result, the manufacturer has charged Suniso into the reciprocating and centrifugal compressors and smaller hermetic units for the past six years. There have been no reports of wax formation.

Because of unmatched service records like this, Suniso Oils are

the first choice of prominent manufacturers. All Suniso grades have extremely low pour points and low wax separation points. Also they have exceptionally high dielectric strength and high resistance to chemical change when mixed with Freon or any other modern refrigerant.

Profit by the experience of others. Get more information about non-waxing Suniso Oils from your jobber, or write Dept. RN-12.

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## SUNISO REFRIGERATION OILS

"JOB PROVED" THROUGHOUT THE INDUSTRY



## Farm Women Speak Out on Freezers

Housewives Tell Why They Buy Freezers, How They Use Them; Some Find Units Too Small, Need Double Their Present Space

CLEVELAND—Why do farm women buy freezers? How do they use them? What benefits do they derive from them?

Some answers to these and like questions were provided at a special food freezing program presented for the women's department editors of farm magazines by the household refrigerator division of General Electric Co.'s Appliance and Merchandise Dept.

The program consisted of a panel discussion by a group of 15 Ohio and Indiana farm women who own various brands of freezers ranging in size from 8 to 32 cu. ft. Miss Lura Jim Alkire, manager of the G-E Consumers Institute, and Stanley C. Schuler, of G-E's Appliance and Merchandise Dept., were moderators.

The farm women were selected simply because they are representative housewives who make good use of their freezers, it was explained. About one third of them still rent lockers. Another third gave up their lockers when they bought a freezer.

Extracts of the discussion follow:

Mr. Schuler: Mrs. D., why did you get a freezer?

Mrs. D.: First of all, we got it for economical reasons. My husband was in R.O.P. in the arsenal and I was doing most of the driving and with the amount of work, it took too much time to be away from home.

We have a farm where we could raise practically everything we wanted to freeze anyway, and we thought it was just a good idea. We could have fresh things and have them right at our fingertips when we needed them.

Mrs. J.: We wanted to save money and we figured the first year it was quite an expense to buy a large one. But it paid for itself easily the first year.

Mrs. G. C.: That was our experience, too.

Miss Alkire: Has Mrs. S. a different idea?

### 'I AM A BACK NUMBER'

Mrs. S.: Our daughter had a large freezer on the farm. I was over there and into her things, and she and I went to all the frozen food meetings, and I said, "I am a back number. I am in the horse and buggy days. I want a freezer."

This little 2½ ft. on the top of the refrigerator is just a temptation. I bought too much and couldn't get it in and so I took it over to my daughter and then had to go after it when I wanted it. So I bought a freezer.

It sounds peculiar to tell it, but I bought it because I wanted to be modern and do things like that. If you ask my husband, he will say he bought it to put strawberries in. He has them now.

Mr. Schuler: How much space do you have in strawberries?

Mrs. S.: I have 65 boxes in now. The two of us are going to do right well. Maybe we will have company all winter.

Mrs. Z. C.: I thought a freezer would be a good investment. We sell chickens out of the freezers. We have a chicken and egg business. I also bought it because it was convenient to go to the freezer and get whatever food I wanted.

Mr. Schuler: I have tried to find if there was one over-all reason why [these ladies] bought freezers and I came to the conclusion—and some of them have refuted me—that they wanted to save money. Now I would like to find out why they like their freezers today, after they have used them a while. Mrs. M., what do you get out of your freezer now? Is it convenience or money saving?

Mrs. M.: My two children keep me plenty busy. With the food in the freezer, I can depend on having good meals in a hurry if something comes up in a moment. The children do have their off times and it allows you to have something in the house.

You can set a nicer table quicker if company drives into the driveway. It really spoils you. And of course, I like the freezer because it's like that old standby, the community store.

Mrs. K.: We dress 25 to 30 chickens and maybe I don't have a sale for those chickens on that date but over two weeks' time I can sell every one of them.

Some of my foods grow in small

quantities and at different times. With a freezer I can put a few boxes away every day or so, whereas with the frozen food locker, I wouldn't drive 15 miles for two boxes of berries.

I pick a lot of blackberries and raspberries out in the woods. You don't have too much time to go clear after them and fix them and then take them to the locker. And lots of times the locker would be closed by the time I could get there.

Mrs. D.: May I add elderberries?

Mr. Schuler: How do you freeze elderberries?

Mrs. D.: Wash them and drain them and put them in the package, close it up and put it in the freezer.

Mr. Schuler: Mrs. D., you said earlier that you get a lot of use out of your freezer because of unexpected

guests and I gathered you also kind of feed the entire neighborhood. Is that right?

Mrs. D.: Not exactly. We did have a rather amusing experience. When we got a freezer, it was the first one in the community and it was a curiosity. A neighbor lady called me one day and said, "Say, we have just got all kinds of strawberries. Can't we get together and put away some strawberries? I will furnish them, pick them, and I will give you half."

I wound up with 90 quarts of strawberries as my share. I did that several times because we didn't have strawberries. I have a whole mess of strawberries in there yet and some of them are 2, 3, 4 years old, and they are just lovely.

But I do freeze a lot of things and we do have a lot of company, that is true; and knowing that you have

the freezer, you can just put up a really nice meal and you can do it so easily and it saves you so much time.

Miss Alkire: Mrs. D. P. had an English guest in her home for a month who had interesting comments.

### A NOVELTY TO ENGLISHMAN

Mrs. D. P.: He didn't know what a food freezer was and he was very impressed with the meals and to know that you could go out and do the things I do and still have a very good meal.

Mr. Schuler: Now I want to know how much space in the freezer is given to prepared foods, like cakes and pies and stews and so forth?

Mrs. A.: I don't put a whole lot of prepared foods in my freezer except at the time that the food is in season, such as strawberries and cherries. Then I make up a few pies ahead and have them in my freezer until such time as I need that space for something else.

I like home-baked beans and I bake them in large quantities now and store them in my freezer for future use. I also make strawberry tarts and use those for a treat later on. I got my freezer originally to cut

down on my food budget and at first I thought I wasn't cutting down because when I started to use the product I was still spending the same amount at the store. Then, in checking with my friends, I found they were all raising their food budgets while mine was staying the same. That's when I realized I was really saving money.

No, if I were to be in the market for a freezer again, I believe I would buy it not alone for economical reasons but also for the convenience and the difference in the taste of the food over canned fruits and vegetables the preserving method I had previously been using.

Mr. Schuler: Mrs. Lang, how much space in your freezer is given to prepared foods?

Mrs. J. L.: We have only a total of 15 ft. and I only have strawberries.

Mr. Schuler: Mrs. D., how about you?

Mrs. D.: None at all.

Mr. Schuler: Even with your unexpected company?


Mrs. D.: I try to make homemade  
(Concluded on next page)

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...You'll Choose the Franchise With a Future—*P.D.Q.*



**The Best Is Yet to Come!**

The big surprise in 1951 major appliances is the new *Deepfreeze line!* Wait and see it before you decide which appliance line you'll sell in 1951. It's an impressive climax to anything you've seen or read about!

The strikingly new Deepfreeze Appliances feature new convenience, new beauty, and revolutionary new features. They're outstandingly different . . . they represent the advanced improvements dealers and consumers *expect and get* from this famous name manufacturer.

In 1951—as always—Deepfreeze can be the profitable mainstay of your business. Get the *complete* appliance picture for 1951 . . . see the great new Deepfreeze line. You'll sign up with Deepfreeze—the Franchise with a Future!

## Farm Women Tell Experiences In Freezing School Lunches, Pastries, Meats, Chickens

(Concluded from preceding page)

cookies and maybe a cake. Sometimes I have pies but not too often. I just don't have space.

Mrs. O. P.: I try to prepare my children's luncheons ahead of time, make the sandwiches and freeze them. In that way, it doesn't take time in the morning to get them ready.

I make cakes and rolls and cookies. It seems like it is much fresher even than when you buy it out of the store. One morning I was out of bread and I had forgotten to take it out of the freezer, and so I got it and put it in the toaster and it was much fresher that way. The children enjoyed it.

Mr. Schuler: Mrs. J., don't you put school lunches?

Mrs. J.: Yes, I have done that. But I don't freeze them very far ahead. I don't think they are so good.

Mrs. S.: I don't freeze many sandwiches. I do make individual pies.

I take a day when I am making pie anyway, and I make up a dozen of them—berry pies or apple.

I bend little pie tins up on the side. They hold the juice and fit into the dinner box. You can put them in the box and they will be thawed out by noon.

Miss Alkire: Mrs. J. L. L. does a lot of that.

Mrs. J. L. L.: When we bought our freezer it was for meat, nothing else. My husband didn't want it filled full of paper boxes and things.

But now when I do my berries or cherries, I make up a lot of pie dough and get the pies all ready and put them in the freezer, and bake them when I need them. Then when he brings a man or two home for lunch, I have them.

Miss R. C.: I bake cakes before I put them in the freezer. With cookies, especially the sticky kinds that are hard to chill enough in the refrigerator, I put on a piece of floured wax

paper in a bowl and put them in the freezer, and perhaps leave them over night. Next morning I take them out and while they are still frozen, slice them down and put them in the oven. It saves a lot of mess.

Mr. Schuler: What cake freezes best?

Miss R. C.: The regular two-egg white cake is wonderful. There is a banana cake and orange cake.

Miss Alkire: We had several of our people interested in freezing beef and fish.

Mrs. J. L. L.: We take our meat to the butcher and then bring it home and package it and freeze it ourselves. I don't have a separate freezing place. We put the meat around the bottom and sides of the freezer. It tastes wonderful.

### FINDS NEW WRAPPING METHOD

Mrs. A.: I don't do much with meat but we have our own chickens and I have found a new method of wrapping the chickens. The first year, we put them in the flat top bags. They didn't make a neat package and we felt they took up too much room in the freezer.

Now we cut them up and I have

pans that are approximately 5 by 10 and 2 in. deep. We put them into the pans and put them in the freezer and press them. When they are frozen, we take them out and wrap them in aluminum foil and they make a fine square package in the freezer. In that way, we use all our space to good advantage.

Mrs. D.: I do the same thing. I use 8 by 8-in. pans and lay a wax paper in the bottom and then I put the chicken skin side out, cut side in. I moisten them real well beforehand, and pack them in the pan and put a paper over the top and tuck it down around the edges and freeze it. That makes a nice firm package.

Then I take it out and wrap it. If I don't have it in water when I take it out of the freezer after it is set in this package I make it quite wet and then wrap it, and that makes a coating of ice over it, and I do not have any trouble with freezer burns.

Mrs. J.: I follow the same idea. Cut the birds up and fill the pan with water.

Miss R. C.: I wonder if Mrs. D. double-wraps her chickens. I always double-wrap. I have had no trouble with freezer burn. We use K.V.P. wrapping.

But we learned the hard way, too. The first time we put chicken in the freezer it tasted more like sawdust. That is why we investigated and found we hadn't double-wrapped and should have.

Mrs. D. P.: I have never double-wrapped and I have never had burn.

Mrs. A.: I just use cellophane. Maybe it is the length of time these ladies keep their chickens. Maybe it gets the burns if it is kept long.

Mrs. D.: Did I understand some of you ladies to say you don't have the quick freeze? I wonder if that is why I have gotten it.

Mrs. D. P.: I have a quick freeze. I put up 30 chickens last year at one time, one wrap.

Mr. Schuler: Miss M. L. L., do you have any favorites among ice cream?

Miss M. L. L.: We use the old-fashioned ice cream and get the cream hard, and then pack in quart cans. You can make peach ice cream; and you can put chocolate dip over it or marshmallow topping. Whenever you want ice cream you get it out about 15 minutes before the meal and let it thaw a little bit. It is very easy to make.

Mrs. D. P.: I don't make ice cream. I buy it from the dairyman and get a 2½ or 3 gallon can and keep it on hand. We find it is better than paying 90 cents a quart. It runs us 45 cents and you have it on hand; and then you can have ice cream and strawberries.

Editor: How many feet do you think the average farm home should have?

Mrs. S.: I have a 10 ft. besides the top of the refrigerator. I could use twice as much.

Mrs. J. L. L.: I only have 8 but I could use twice that much.

Mrs. D. P.: I think I would go to 24.

(Note: The panel members agreed that 24 cu. ft. of freezing space is about right.)

Editor: If you have a freezer that large, do you have periods during which it is fairly empty so you don't feel you are making good use of it?

Mrs. D.: No, when the apples start to come in, I make applesauce, just as you are going to serve it on the table, season it and everything and package it and put in the freezer. I think I had something like 50 packages last year, just putting it in at different times.

That frozen applesauce to me is just the same as eating ice cream. People to whom I have given packages have told me the same thing. After it is frozen, the seasoning goes through it very beautifully, and it is just wonderful when you open it.

Mrs. K.: By the time your meat tapers off you are starting on vegetables and so you pretty well have the freezer full all the year round. I think most farm people do.

### 2 SMALL OR ONE LARGE?

Editor: I would like to ask if any of these women would like to have two smaller freezers instead of one large one.

Mrs. M.: That is my idea. I have one and I would like to have another, and as one goes down I would have the other.

Miss M. L. L.: We have a 15 ft. and we would like to have another one because we just don't have the room. Maybe you have room for a hog or hog and a half; but if you have vegetables you don't have enough room.

Editor: I was thinking of the space. Some of these big freezers take a lot of room. If you have two smaller ones you might keep them in different locations. It might be more convenient. Where do you keep the freezer?

Mrs. J. L.: In the basement. Most all of them do.

Mrs. Z. C.: Ours is in a solarium on the north side of the house.

Mrs. G. C.: Ours is in an entrance room.

Mrs. D.: Ours is in an old-fashioned tanker.

Editor: Would you want them in your kitchen if you had room?

Mrs. J.: I had laundry tubs in the basement and I had my husband make a wooden rack with a screen over it and I have racks I wash my vegetables on and drain them on the other side of in the laundry tubs. And I have a stove in the basement. It is a very handy place for a freezer and is always cool in the summer.

(Note: All the women are firmly convinced that their home-grown and home-frozen food is better than commercially frozen food.)

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The Deepfreeze trade name is famous the world over. It is the name of the world's first and finest home freezer. It has won wide consumer acceptance through its consistently high quality.

Deepfreeze quality extends beyond its home freezer, the product that brought better living to America. It is evident, too, in the superior features

of Deepfreeze Refrigerators, Electric Ranges, and Electric Water Heaters. And for appliance dealers there's high quality in Deepfreeze Advertising, Sales Training, and all the many selling aids made available to them. Dealers value the Deepfreeze Franchise for this high quality. It guarantees profit now in the Franchise with a Future!

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Question: How does the Motor Adapter sell other items, such as belts, pulleys, controls etc.? Answer: By means of making bases universal, and thereby causing more motor sales. More motor sales, more sales of allied items. You can wager your customers will verify this.

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## European Representatives Tour Jamison Co. Plant

HAGERSTOWN, Md.—Representatives from 11 Marshall Plan nations recently toured the plant of Jamison Cold Storage Door Co. here.

The men are European leaders in the fields of storage, handling, and transportation of perishable foods. Under the sponsorship of ECA, they are making a two-month tour of American industries.

The countries represented by the group include Austria, Denmark, Norway, Sweden, United Kingdom, France, Italy, Belgium, Switzerland, Germany, and the Netherlands.

## Packaging Show Scheduled For April 17-20 In East

NEW YORK CITY—The American Management Association announced that it will sponsor its 20th National Packaging Exposition April 17-20 at the Auditorium in Atlantic City.

Machines, equipment, and services used in packaging, packing, and shipping will be on display, and it is expected that the show will be larger than ever before, in both area occupied and number of exhibitors having displays.

The week of April 16 has been designated as "Packaging Week." Events scheduled include not only the exposition, but the AMA Packaging Conference, which will be held in conjunction with the show. In addition, a number of industry groups are planning special meetings during the exposition days.

## A 'Turn-Key' Operator Tells His Story

Being Able To Do a Nearly Complete Food Service Job Gives Commercial Firm an Advantage In Competitive Market

BUFFALO—When the sale of equipment to restaurants, bars, grilles, luncheonettes and institutions starts to get tough, and competition has increased (as it has since the end of the war), that's the time when it's especially advantageous to have more things to sell, rather than less.

So says Edward J. Meyer of Meyer Equipment Co., supplier of refrigeration equipment, kitchen equipment, and fixtures for such establishments here. The Meyer Co., one of the largest firms of its kind in this part of the country, can do practically a "turn key" job for almost any kind of a food service job.

Cups, saucers, and pans can be furnished by the Meyer Co. as well as the refrigerators, cooking equipment, service counters and all the other items needed to serve food and drink.

### WIDE RANGE HAS ADVANTAGES

"Having a wide range of products to sell is a help in many ways," Meyer points out. "There is usually some activity on some of the lines you carry at all times which keeps a fairly steady flow of income. And it helps with your salesmen, because it means that they have a number of things to talk about and try to sell."

The "cup and saucer" part of the business is not emphasized too much,

Meyer pointed out, but it is a convenience to a customer who wants to get a complete job and prefers to deal with one supplier, or as few as possible.

The development and expansion of the Meyer Equipment Co. reveals some of the changing trends in the business, and also how the management has geared its operations to the changing trends and opportunities.

### GRANDFATHER FOUNDED FIRM

Founded by Meyer's grandfather, the firm originally supplied beer pumps and other beer dispensing equipment to taverns and restaurants. In 1924 the firm got into refrigeration, handling such equipment as the Superior Ice Machine and Nizer units, and the Russ soda fountain, said to have been the first completely mechanically refrigerated soda fountain. (Russ later merged with Bastian-Blessing Co., and Meyer still handles the Bastian-Blessing soda fountain line.)

In 1930 the Meyer Co. merged with another establishment in the restaurant fixture and supply field, and its expansion in that field dates from that time.

Refrigeration continues as a large part of the company's business. A big volume is done in beer cooling equipment, automatic ice cube makers, beverage coolers, and refrigerated fixtures of various kinds, in addition to the complete restaurant, bar, luncheonette, and institutional work.

### HANDLES OWN SERVICE, INSTALLATION

Its own service and installation department handles all work of that nature, with seven service trucks in operation.

Pre-coolers for draft beer cooling systems are fabricated in the form of knockdown sections in the Meyer Co. shop, which makes possible easy and quick erection on the premises of coolers of any size and shape desired.

Shop facilities also include all the necessary tools and fixtures by which it is possible for Meyer Co. to build bar and counter equipment in practically any type of material and finish that you can name. The firm can point to installations made in stainless steel, copper, oak or other woods, and various plastic materials.

In refrigeration, however, Meyers states that the company rarely handles any jobs over 3-hp. in size (for any one machine). Of course, many jobs run much larger than that in total connected horsepower, but are handled by a number of small units.

The problem of organizing, directing, and compensating a sales force to merchandise such a wide variety of items is one about which Meyer says "we've tried out all the systems and

methods we've ever heard about, and as yet haven't arrived at a completely satisfactory solution, but we seem to get along somehow."

Meyer's salesmen sell anything the store handles—anywhere. There is no segregation of activity by product or by territory. This leads to some overlap and confusion, Meyer admits, but he thinks it gets the maximum productivity out of the salesmen.

There are, of course, salesmen who are better versed in some phases of the business than others. Some specialize in soda fountains or bar equipment, and when some large job involves such equipment, these specialists will work with the man who is selling the whole job.

### NO UNIFORM COMPENSATION PLAN

There is no uniform policy for paying the salesmen. The company tries to gear compensation plans to suit the desires and abilities of the individual salesmen. On this Meyer says:

"A survey of 100 dealerships like ours turned up 47 different ways of compensating salesmen. Along with our own experience that about clinches the argument that there is no one 'best' method of compensating salesmen."

Salesmen don't canvass, but spend most of their time running down active leads from many sources. New building and renovation reports, and tips from towel distributors and other vendors serving the food service fields furnish valuable leads, and

(Concluded on next page)

# IT'S BUILT RIGHT TO SELL RIGHT!

## New Kelvinator

### 12 cubic foot FROZEN FOOD MERCHANDISER!



- Perfect Team-Mate for Kelvinator's "6"!
- Holds More Than 400 Average-sized Frozen Food Packages!
- Illuminated Superstructure brilliantly displays signs or packages!

HERE IT IS — the ideal companion for Kelvinator's highly popular KM-6 . . . and it's a sparkling, spacious "12"! Its cost is low. It's designed to sell more frozen foods. It provides maximum capacity in minimum floor space. Its open top provides maximum display. Its 3 refrigerated dividers provide safe, sure, positive food protection. Its beautiful, illuminated superstructure is designed to attract sales as well as light up the cabinet interior. It's a cabinet that will help your customers do a greater, more profitable volume in frozen foods. Best of all—it's your chance to get your share of the growing frozen food cabinet market.

Act now—just call your Kelvinator distributor. Ask, too, about Kelvinator's KM-6 Merchandiser shown at left. It's a "Juice Center", a "Packaged Foods Center", a "Spot Special"! Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.

PROFIT TODAY...BUILD FOR TOMORROW WITH

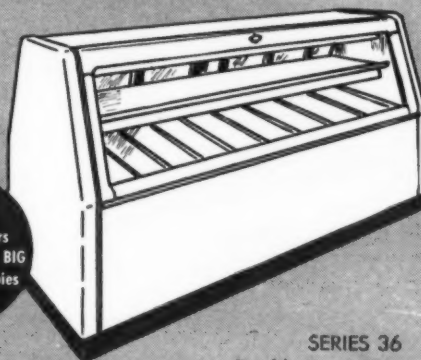
## Kelvinator

THE NAME THAT SELLS...THE NAME THAT SATISFIES!



Serving America's Finest Food Stores!

There's an interesting story for dealers in "Bally Means Big BUSINESS". Copies available

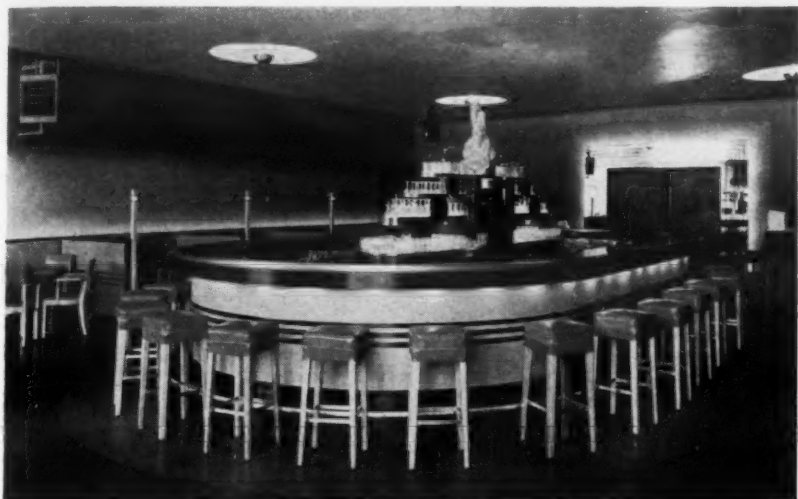


SERIES 36 Double Duty Case

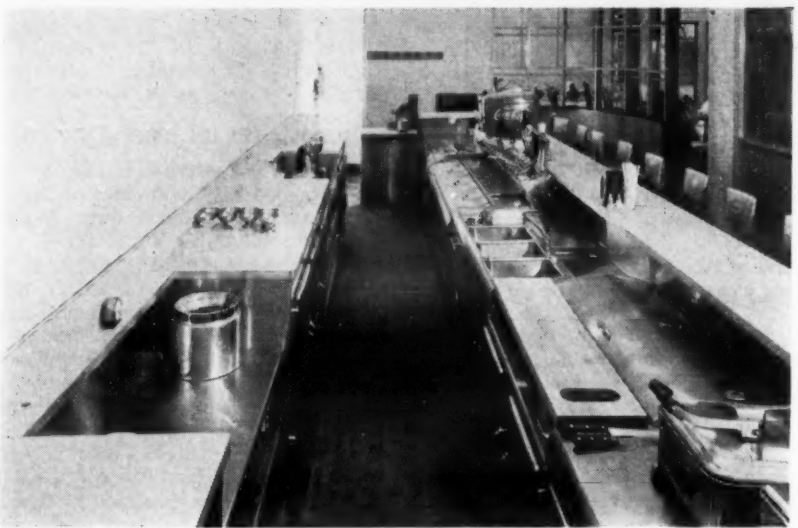
...ONE OF 62 DIFFERENT BALLY MODELS and SIZES

## Bally

REFRIGERATED DISPLAY CASES  
Bally Case and Cooler Co., Bally, Pa.



MODERN BAR: This is typical of the complete installation work done by the Meyer Equipment Co. of Buffalo.



SNACK BAR: Being able to furnish nearly all of the equipment which goes into an installation gives the Meyer Co. a competitive advantage over a firm that can only bid on a small portion of the necessary equipment. This equipment was put in for the Buffalo General Hospital.



BEER COOLING: Beer dispensing equipment was one of the early lines carried by the large Buffalo firm.



VARIETY PLUS: This particular installation at Beaver Park, Grand Island includes: two fountains, 2 ice cream cabinets, 3 bottle coolers, two backbar refrigerators, and two refrigerated sandwich units.

## 'Turn-Key' Operator Tells How He Functions--

(Concluded from preceding page)  
of course, the hundreds of users of Meyer's equipment are a constant source of new business.

Meyer is highly enthusiastic about the coin meter plan of selling, not only as a matter of making it easy for prospects to buy single refrigerated fixture items and pay for them painlessly (on automatic ice cube makers, for example, it is easy to prove that daily payments will be less than the daily cost of delivered ice), but it is a perfect setup for getting repeat business.

Sales and servicemen from the Meyer Co. make collections from the meters, and naturally are aware of when the buyer has completed payments. This gives them a chance to promote sales of additional equipment "on the same easy meter payment plan."

"We have about 150 of the 25-cent meters out," Meyer says. "Occasionally we have to replace some be-

cause the customers have found it such a good way to save money for things that they ask to buy the meter."

Most of the straight financing of jobs is done through local banks, which since the immediate post-war period have generally been glad to get such business, although of late they are tending to tighten up rather sharply on new tavern and bar jobs.

Meyer Equipment Sales provides a drafting service to draw up plans for complete bar and restaurant installations.

"It pays off to do this for the general run of jobs," says the sales manager, "but we haven't found it wise to do it for the big institutional type jobs. You can spend more money on a layout for those jobs than you can get in return. A number of firms that do layouts for institutions are charging fees for such work."

## Hussmann Breaks Ground For New Office Building

ST. LOUIS—The Hussmann Refrigerator Co., here, has broken ground for a new office building on North Broadway. The new building is being erected to the east of the new 350 by 360-ft. (126,000 sq. ft. floor space) warehouse just completed for occupancy Nov. 1.

The company acquired last spring a 17½-acre site extending from Broadway running west on Taylor to Florissant Ave. and adjacent to Terminal Railroad tracks. The new office building for which foundations are now being completed is the second unit to be erected on the new site.

The first section of the new office building will contain 40,000 sq. ft., will cost approximately \$500,000, and is planned for occupancy about June 1. Space has been provided for expansion as other units are moved to the new plant site.

The building now under construction will house the administrative offices of the company, the accounting offices, and the purchasing and sales departments. There will be a showroom for display of Hussmann products, meeting rooms, and cafeteria.

In moving the general office to North Broadway the present office and administrative building at 2401 North Leffingwell Ave. will be taken over by the factory administration, engineering, and service departments. The area so released will be used for additional manufacturing facilities for the company.

## On to Philadelphia ... for NEW IDEAS!

Striking advances in HEATING, VENTILATING and AIR CONDITIONING equipment for all types of commercial and public buildings, industrial plants, institutions and homes... the latest trends and practices—a wealth of sales-stimulating ideas—all are in store for contractors; distributors; consulting design and sales engineers at the—



Over 300 informative, technically-staffed exhibits and demonstrations will afford you unequalled opportunity to see and compare at one time hundreds of new and improved items from complete units to maintenance supplies—to discuss your plans, problems, and requirements first-hand with engineering specialists.

Plan ahead now to attend this foremost event of its kind... to get more valuable information, more progressive ideas, more worthwhile contacts than you can acquire in any comparable time or way. Note the date—January 22-26, 1951.

Auspices of the American Society of Heating and Ventilating Engineers  
Management International Exposition Company

### WHITE-RODGERS

#### Automatic DEFROST TIMERS Can Be Engineered to Your Requirements

Put the positive accuracy and complete dependability of Hydraulic-Action to work on your refrigeration equipment. Specially designed controls, such as here illustrated and which have been engineered for several manufacturers of commercial refrigeration, can be adapted to fit your own needs. Ask our Engineering Department for help.

**Available from stock—this standard type**

Normally cycles as a refrigeration temperature control. Range of -20° to +50°. Has five-foot capillary and 15½-inch sensitive bulb. Operates on either 115 v. or 230 v., 60 cycle A.C. Wired to permit compressor to operate on separate circuit. Automatic defrost period adjustable from 15 minutes to 5 hours on 24-hour, 115 v. electric clock.

Type 2413

## WHITE-RODGERS

### Controls

FOR REFRIGERATION  
HEATING AND  
AIR CONDITIONING

ST. LOUIS 6, MO.

—Branches—

NEW YORK 52 Vanderbilt Ave. CLEVELAND 3005 Euclid Ave. CHICAGO 800 W. North Ave.

Resident Sales Engineers in all Principal Cities

## Promotion & Engineering Pay Off

# Year-Round Opportunities In Resort Area Tapped by Ingenious Sales-Service Firm

By C. Dale Mericle

TRAVERSE CITY, Mich.—In the heart of "Michigan's playground" and home of the National Cherry Festival (which, incidentally, he chairmanned for two years running), Paul Garthe has carved out for himself an enviable chunk of the commercial refrigeration and household appliance business in the six years he's been here.

But Garthe's no newcomer either to refrigeration or the territory, having been born and raised in Northport, Mich., some 30 miles away. And as for refrigeration, his many friends throughout the country remember when he started in the business back in 1927 with Frigidaire's Milwaukee distributor—the Stover Co.—as a serviceman.

He was absorbed into the Frigidaire organization when the company took over distribution activities in that area and then in 1936 he transferred to Dayton, joining the technical division of the company's service department. Finally in 1944, by now he was assistant supervisor of the division, he took the plunge and went into business for himself.

### 3 CALLS TO START WITH

The factory helped in this venture to the extent of giving him three troublesome service calls in the Traverse City area.

"And that," says Garthe, "is the closest we've ever been to catching up on our service calls."

Service is the predominate note in the Garthe operation, whether it be commercial, air conditioning, or household appliances. In fact Garthe long since adopted the slogan—"The Store that Service Built"—which appears in all newspaper, direct mail, and radio advertising.

But besides having a crackerjack service organization, and knowing a whale of a lot about the technical details of his field, Garthe is no slouch when it comes to selling and sales promotion, either. To cite an instance:

"Last year we took a booth at the annual state Apple and Potato Growers Show, which was held in Traverse City," he recalls. "We hauled a 5-gal. Frigidaire bottle-type water cooler over and installed it in the booth. But instead of using water, we kept the bottle filled with cider."

"It did take a little time to clean out the cooler after the show, but we sold two apple storage jobs as a direct result of this stunt."

Garthe has put in a number of apple storage jobs in recent months, opening up a sizeable new market in this orchard area. Most of these jobs also have very interesting aspects from the technical point of view, and will be described later.

### 'OYSTER BAKE' HELPS SALES

As for sales promotion methods, though, the Garthe organization makes its mark in other ways, too. There's the annual "Big Oyster Bake," for example, that Garthe has promoted two years in a row.

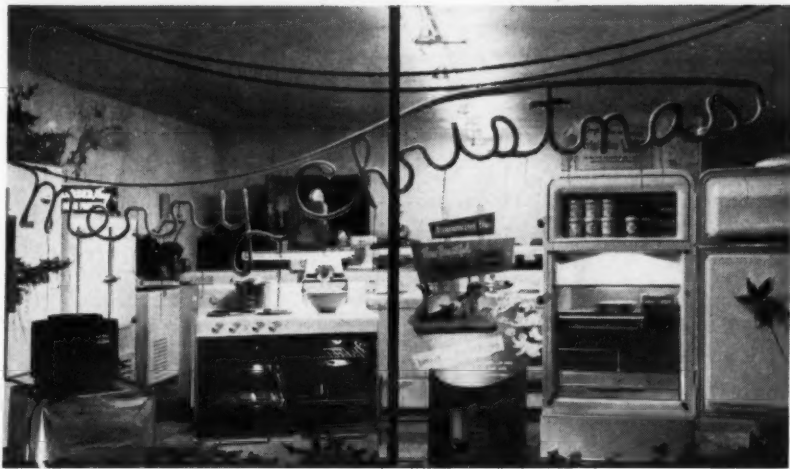
"We limit this to the business and professional men in the area, and last year we had about 150 men out for it. We have a couple barrels of oysters shipped in by express from Baltimore. They only cost \$22 apiece. Then besides the baked oysters we have a buffet lunch and drinks. The last one was held on a Saturday night in February out at Frank Sleder's spotlessly clean slaughterhouse, with Sleder helping by supplying the food," Garthe explained.

Obviously, this is "institutional" advertising and sales promotion, but it certainly can do nothing but cement Garthe's relations with the business and professional men of the community, who represent the best logical prospects for both commercial refrigeration and air conditioning, not to mention domestic appliances. There'll be another oyster bake this winter.

### WINDOW DISPLAY TAKES PRIZE

Still another facet of the store's promotion efforts is its successful participation in the contest staged by the Traverse City merchants for the best window display during the Christmas season. Garthe has been a winner more than once.

Last year with his three sizeable



SALES PROMOTION is an important phase of Paul Garthe's domestic and commercial operations in Traverse City, taking several forms such as this prize-winning window display featuring the Season's Greetings in frosted tubing.

## PART 1

show windows he featured laundry equipment in one, a large Christmas tree in another, and in the biggest window there were several Frigidaire appliances but the attention-getter was a large "Merry Christmas" spelled out in thickly frosted copper tubing. Nothing new, of course, in hooking up such an evaporator, but the stunt was novel enough to win the blue ribbon for Garthe.

The display was further tied in with sales promotion through reproduction of a night-time exterior photo of the store front on a Christmas card sent to all customers and prospects.

One of the most successful sales helps the store has employed is the \$5 "merchandise check," which was originally given to users who brought in prospects. The check could be applied against the purchase of appliances.

### CHECK INCREASES SALES

"But," Garthe explained, "John Delanty, our sales manager, conceived the idea of sending this 'merchandise check' to newlyweds and new mothers, getting the names from the vital statistics columns in the paper. We made a lot of sales this way, including some to mothers who were still in the hospital with their newborn babies."

Considerable advertising is done, too, with heavy emphasis on newspaper space. In addition, Garthe airs a short commercial over the local radio station five times a day, six days a week.

"These 30 spots cost us only \$48 a week, and they always stress our slogan—"the store that service built," he explains.

The store takes some space in the annual Chamber of Commerce promotion piece "Vacation Days," and at the present time Garthe is working up a folder along somewhat similar lines that will be devoted exclusively to his own store.

"We also invite churches to hold rummage sales at our store," he adds. "On the face of it this would seem like a great bother, but you'd be surprised how many used refrigerators and new appliances we've sold as a result," Garthe said.

### PLACARD HELPS SERVICE

Sales promotion and advertising are combined with a service help that Garthe has devised, too. A number of refrigeration firms put small stickers or signs on their jobs to remind the owner of the service or installation company. And then there are a few that will tack up a small card listing data pertinent to the installation which will help the serviceman who's called in on the job in the future.

Garthe, however, has combined these two ideas on a single, large white placard that measures 17 in. wide by 14 in. high which is tacked up near the compressor on every commercial job. The heading, in big type, reads "Frigidaire Refrigeration System," and directly underneath are blanks to show the compressor model number, refrigerant, viscosity of oil, horsepower, and total charge.

Below this is space to list the "fixtures being refrigerated" and a

record by date of lubrication. At the bottom is the firm name, address, and telephone number.

As for his commercial refrigeration operations, it's the apple storage business that seems to be booming at the moment. Garthe's first installation went in a year ago for Lewis R. Gray, orchard owner near Traverse City, and was described in detail in the Dec. 12, 1949, issue of AIR CONDITIONING & REFRIGERATION NEWS.

Since then he's put in five more, with the total of six having an estimated capacity of approximately 30,000 bushels of apples.

The big sales point in selling an orchard operator on an apple storage is that it enables him to get a better price for his product, Garthe points out.

"Apples usually hit their lowest price at the time of picking, when the supply is greatest. They may bring only 50 cents a bushel at harvest time, but three or four months later, the price can be as much as \$1.50. With this 200% jump in selling price, the grower can almost pay for the installation of a refrigerated apple storage in one season," he declares.

With respect to the cost of an apple storage installation, Garthe figures this way:

"If you have a building that we can insulate, it will cost you about \$1 a bushel for the equipment and the insulation. Larger plants run a little less than this, smaller plants a little more. We generally size them as 2½ cu. ft. required per bushel, which allows room for aisle space and the blowers. What we aim for in the operating conditions is a 34° F. temperature with 90% relative humidity."

One of the largest and most recent apple storage jobs installed by Garthe is the 10,500-bu. capacity plant for W. D. Willard, who operates the Crystal Highlands orchards some 30 miles south of Traverse City near Beulah, Mich.

Willard put up the cement block building which provides a storage room 36 by 48 by 15 ft. in size with a 16 by 36 by 15-ft. grading room in the front. Much of the lumber,

incidentally, was cut and milled by Willard on the spot.

For insulating the storage room 5 to 6 in. of ground cork was placed between the outer walls and the interior Celotex sheathing, which was then coated with a vapor seal. Floor of the storage is concrete, but Willard intends to put a Zonalite aggregate floor over the concrete as soon as this storage season has passed.

The refrigeration system consists of a 5-hp. Frigidaire compressor mounted on the floor in one corner of the outer grading room. It is connected to two 3-ton evaporative condensers mounted high in the gable of the building almost directly over the compressor. At the present time the "evaps" are running as straight air-cooled condensers because the first well sunk for water was still dry when Willard started storing apples. Ambient temperatures have been low enough, however, to cause no trouble.

Low side equipment consists of three Bush unit coolers mounted on the wall at the ceiling to distribute air the long way of the storage room.

### CAPACITY IS RECOGNIZED

Over-all capacity of the system permits loading 400 bu. of apples per day, but Garthe says Willard wants to load 800 bu. daily.

"He understands, though, that the present equipment is not large enough for that additional pull-down load, so he's figuring on having us increase the refrigeration equipment in the near future."

Loading of the apple storage presents a problem in controlling the refrigeration system, Garthe also points out.

"The system is designed to operate (Continued on next page)

# LOOK WHAT THIS Westinghouse CAN DO FOR YOU AND

## 10 IMMERSION MILK COOLERS

All with Drop-In Units  
and Backed by a  
5-Year Guarantee Plan.

Available sizes in immersion-type Milk Coolers: 2, 3, 4, 6, 8 and 10-can sizes, in single and double-row cabinets.

### MODELS:

S2-7A*, S3-12	S4-12, S4-17
D4-12, D4-17	D6-17, D8-17
D8-24	D10-24

8 and 10-can sizes available for either 115-volt or 230-volt a-c service.

\*Model S2-7A is the new, low-priced, small Milk or Cream Cooler for the small producer or for those serving the cheese and butter markets. Producers have been waiting a long time for this Cooler . . . and now we have it.



These time and energy-saving accessories add efficiency to cooling milk: (1) EZ-Does-It® Can Hoist, (2) Polar-Cold® Booster Spray.

To insure that your customers get premium-quality milk in every haul and to eliminate rejections, tell and sell Westinghouse Milk Coolers.

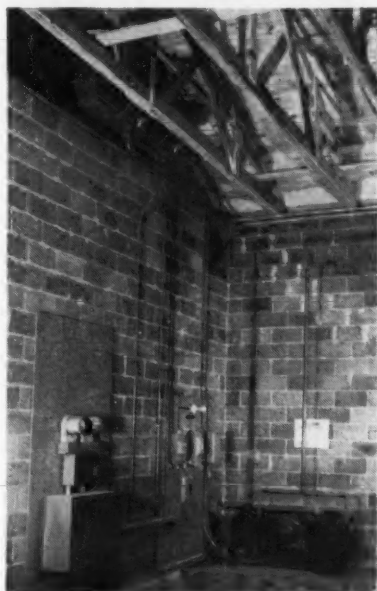
Every Westinghouse Milk Cooler has the time-tested Drop-In type of refrigeration unit . . . with a 5-Year Guarantee on the complete Hermetically-Sealed System . . . compressor and evaporator . . . not the compressor alone!

It is the most dependable unit for the farmer, and is the easiest for the dealer to service.

# Enterprising Dealer Creates Own Boom In Apple Storage Installations



**LARGE** Apple storage completed recently for W. D. Willard at Beulah, Mich., has storage capacity of 10,500 bushels, and is cooled by three Bush unit coolers connected to the 5-hp. Frigidaire compressor (right). Note also evaporative condensers high on wall above unit.



**SMALL** Storage capacity (5,000 bu.) is provided in the building at left, which proves that an orchard owner doesn't have to erect an expensive new building for apples. This was formerly a tool shed, and now modern condensing units (left) run quietly up in the attic among old harness and even an oxen yoke.



**DIFFERENT** Application for apple storage was devised for the Clarence Kroupas, Sr. and Jr., who wanted to cool their "root cellar." Here Paul Garthe explains to Tom Graham (left) of the Frigidaire Detroit branch how a "doghouse" will be built over the condensing unit.

below in the ground floor. Capacity here is approximately 10,000 bu.

An important implication represented by the above installation becomes even more obvious when considering the apple storage Garthe just completed for Clyde Morrison at his orchard a few miles from here.

"You don't necessarily have to put up a new and separate building to serve as an apple storage," Garthe emphasizes.

Morrison first decided to convert the basement of an old tool shed into an apple storage room. The foundation wall of the structure was stone, so a cement block wall was laid inside leaving an air space between the inner and outer walls. Up in the attic, amongst old harness and even oxen yoke, went the 3-hp. air cooled condensing unit to supply the three blower coils in the basement storage. The unit was located against the outside wall through which an opening had been cut.

"Just about the time we had the basement room job completed, Morrison decided he wanted to convert the first floor of the tool shed into an apple storage, too," Garthe recalls. "So we insulated that room, and put another 3-hp. unit up in the attic beside the first one. Three unit coolers were installed for this system."

Now Morrison has a 5,000-bu. capacity apple storage at a relatively small expense. The basement room holds 2,000 bu., the first floor, 3,000, and the total cost of the basement job alone, including wiring and everything else, was only \$1,800.

"Eventually, Morrison plans to erect a new building that will hold 10,000 bu., and when he does, we'll move the original refrigeration equipment into the new structure. Morrison realizes, though, that additional equipment will have to be added to meet the increased load," Garthe explained.

There's another interesting and somewhat similar installation 10 miles north of Traverse City on Old Mission peninsula at the combined farms of Clarence Kroupa, Sr., and his son, Clarence, Jr.

"The Kroupas walked into our store one day recently after we had been running an advertisement in the paper for a week on apple storages," Garthe explained. "They wondered if we could refrigerate their root storage 'cellar.' This was a small cement block building well back from the farm house.

"We insulated the building, put a blower coil inside, and mounted the 1½-hp. air-cooled condensing unit on cement blocks just outside. A 'doghouse' is to be built over the condensing unit to protect it.

"The system's working all right, and the Kroupas are storing about 800 bu. of apples along with cabbages, potatoes, etc., for their own use. The only trouble we've had results from the fact that this, like all other root cellars, has a dirt floor. Moisture just keeps coming through the ground and frosting up the coil, so we now know that a concrete floor should be laid in the building."

(To Be Continued)

## LINE OF MILK COOLERS FOR YOUR CUSTOMERS



AND 3 NEW  
FRONT-DOOR  
MILK COOLERS

All with Drop-In Units  
and Backed by a  
5-Year Guarantee Plan.

IT'S TERRIFIC!  
SLIDE 'EM IN...  
SLIDE 'EM OUT

Here's a brand-new, superlatively practical, colder-cold Milk Cooler with storage at baseboard level to eliminate hazardous and back-breaking lift-in and haul-out of milk cans. Available in 4, 6 and 8-can sizes... Model DF4-17, with 115-volt motors... Models DF6-24 and DF8-24 with 115 or 230-volt a-c motors.

### FREE... Special Display Offer

An attention-getting action display—that stops prospects and helps you sell Milk Coolers. Mail coupon below for information on how to cash in on special offer.

DON'T DELAY... MAIL THIS COUPON NOW

YOU CAN BE SURE...IF IT'S  
Westinghouse

Please send me complete information on your Display Offer and Milk Cooler line.

Name \_\_\_\_\_

Firm \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

WESTINGHOUSE ELECTRIC CORPORATION  
Electric Appliance Division  
Refrigeration Specialties Dept., Springfield 2, Mass.  
12-ACRN



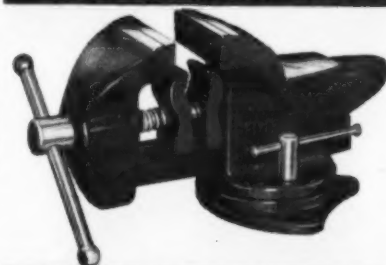
A Vise your Wife will  
approve your having!

Because its many uses will be a money-maker for you! Timesaver, tool Regular jaws with replaceable facings; strong replaceable pipe jaws; anvil surface. Closely machined parts for easy operation. Acme-cut threaded steel screw Swivel base, rigid 3-bolt mounting. Cold rolled steel bar. One-piece steel handle. Baked red enamel finish.

Also, Lower Priced, Lighter Weight Vise.  
See your wholesaler.

**Fine PRODUCTS CO.**  
185 NORTH WABASH AVE., CHICAGO 1, ILL.

NEW PIPE-BENCH VISE



PRICED RIGHT • 5 RIGHT SIZES

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MENT • DETROIT EXPANSION VALVES AND  
REFRIGERATION ACCESSORIES • STATION-  
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Serving home and industry AMERICAN STANDARD • AMERICAN BLOWER • CHURCH SEATS  
DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA INN

## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

the gross circulation of a periodical aren't digits on an adding machine. One single subscriber to an influential trade paper may sell 2,000 advertised products every year, while another mere name on a mailing list couldn't even afford to buy one for himself. Yet, advertising is sold today (more frequently than we like to think) on the basis of bulk figures, rather than upon a realistic appraisal of actual buying and selling power and influence.

Why do appropriation-approvers lean on the broken reed of "figures," even though the latter may be phoney and misleading? One explanation can be found in a notable N. W. Ayer advertisement, which stated: "The lonliest man in any enterprise is the one who makes the final decision. When the Allied Armies, during the war, were poised to leap on the Continent, one man, Gen. Eisenhower, had to take his courage in his two hands and pick the day irrevocably. It is the same way in business."

ONE disconsolate man has to make ticklish, hairbreadth decisions which affect the profits of his corporation, the jobs of his employees, the savings of his investors, and the future of his country. In every other department of his business—manufacturing, research, purchasing, en-

gineering—he can rely on mathematical certainties.

No wonder "the lonliest man" cries for statistics, and bigger and better figures when he has to decide on advertising programs. His job is so gigantic, his problems so complex, and his responsibilities so awe-full that he yearns for any dubious certainty which promises to lighten his heavy burden. His toughest problems, however, can't be solved with slide rules and equations.

What are these toughest problems? Answer: *people*. Human beings. Advertising, public relations, and labor situations can't be calculated mathematically. They're in the realm of art, rather than science.

### New Attitudes

Much as we hate to admit it, attitudes have altered during the last two decades. No longer does every boy and girl take stock in The Great American Chance to Get Ahead—and more's the pity! Rather, they're indifferent to the differing rewards of private initiative and public service. By their own confession they prefer to snuggle underneath the snoozy blanket of bureaucracy, or take little jobs in big corporations. (When they do, of course, they're unhappy, and gripe.)

Older and sturdier citizens, on the other hand, react violently to being typed, classified, and reduced to mere curves on a silly graph. Out of sheer cussedness these independent characters vote contrary to expectations. Would-be leaders who assume that they know What's Best for Poor Li'l Chillun are blackballed, and their candidates snowed under when John Citizen enters that private voting booth. No Big Shot can tell him how to vote and get away with it.

Young and old alike are fed up with all sorts of Big Shots, and they resent anyone who tries to throw his weight around, or "pull rank." Even more do they resent stuffed shirts who haughtily show off their riches and extravagances. (Thorstein Veblen identified this foolishness as "conspicuous waste.")

Around the world there's a revolution in progress—a revolt from caste systems, inherited social position, and wasteful luxury. People who think they don't get enough despise complacent "fat cats."

Newspaper "society sections" are dangerous liabilities to their publishers, and to all the latter hold dear. They stir up more envy than they're worth. Simpering stories about the So-and-Sos wintering in Bermuda, or tossing lavish charity balls, put men who have to deal with unions behind the 8-ball.

One of the smartest men we know—top executive of a small manufacturing company—has traded in his Cadillac on a Chevrolet, so that when he parks in the company lot he won't stir up antagonism. Now he enjoys driving to work, and he gets along better with his associates. Incidentally, he has squelched his wife's desire to get her name in the society columns.

This fellow is groping toward an understanding, but he hasn't gone far enough. Next step: bowl and hunt with his employees, ride the streetcars and buses and day coaches once-in-awhile, sit in the balconies and the bleachers, and listen.

### Is the Salesman Obsolete?

The foregoing amateur philosophy leads up to an embarrassing question. "Is the present-day salesman obsolete?"

If you go along with the complaints of a lot of the people the writer has listened to—in the bleachers and streetcars—you'll say "yes," and mourn for the vanishing race of racy salesmen.

Personality salesmen helped build our country. How many of these earthy fellows do you encounter today, especially among the younger generation? Modern "scientific" sales methods, we fear, have produced a breed of salespersons who are a race apart—aloof characters who act as if they're superior to and above their customers.

"Scientific" sales training concentrates on turning out knowledgeable salesmen, yes. But the very superiority of their knowledge—if it's too obvious—may tend to make the prospect feel inferior. And that's bad. Hasn't an ultra-dressed store clerk-snob made you feel uneasy and unkempt recently?

The present mood rejects the

pressed-suit, flower-in-the-bottonhole, Emily Posted salesman who acts as if he knows more than you do. Like the dignified politician and the insulted businessman, his malarkey and his posing aren't trusted.

Buyers, like voters, are suspicious of anyone who talks too importantly or looks like he's better-off than they are. They feel uncomfortable and uneasy in glassy, brassy, super-duper merchandising salons, also, and they scoff at testimonials from Mrs. Snootyrich (which they realize are purchased) and from "Men of Distinction."

The Louisiana politician who makes a fortune every month out of Hadaacol patent medicine (vitamins swimming in an Old Fashioned cocktail) knows what time it is today. Hadaacol testimonials are from people you never heard of; and by making plain people feel important this Huey Long follower has created the dizziest success story of the 1950's.

### Have We Taken the Fun Out of Buying?

Everybody likes to spend money, every sale or purchase should be a two-way transaction which gives pleasure to both parties. Does that happen often nowadays?

Of this we can be sure: the I-know-it-all-and-you're-dumb approach rubs prospects the wrong way. Too many modern "scientific" sales training methods, based upon mathematics and surveys, turn out salesmen who antagonize customers in that snobbish fashion. Instead of upstaging the millions we'd like to sell, treating them subconsciously as inferiors, and assuming that they're cattle which must be penned by brute force and then loaded into freight cars, why not woo them with warm friendship, genuine humility, and sincere interest in their problems?

The old-time "drummer," with his funny stories and engaging personality, is missed in this heyday of coldly-calculated merchandising. Likewise, the trader. Those of us who grew up in small towns will recall with affectionate nostalgia the storekeepers who traded calico and flour for butter and eggs; who bartered shoes and suits for house painting and carpentry, schoolbooks for stacks of cordwood, and candy for sweeping out the general store in the mornings. Honest traders were beloved and respected by everyone.

Those days are gone forever, we suppose, but the principles of trading are just as good now as they were then. The Golden Rule sums them up. Remember when a man's proudest boast was "my word is as good as my bond?"

Instead of trying to outsmart or overpower a customer, a responsible salesman who senses the temper of the times will be a trader. Proud and happy he'll be to let his prospects enjoy buying. He'll be their humble servant, rather than their disdainful master. His modest recommendations will carry weight because they trust and like him.

Never, never will he be suspected of "putting on airs."

If an old customer is interested in buying a new kitchen "zink with a water fasset," he won't smirk superciliously, or confuse her with a learned dissertation on the automatic dishwashing and garbage-pulverizing sink. He won't correct her grammar and pronunciation nor shame her. Rather, he'll escort her to one of these newfangled contraptions, encourage her to get the feel of it, and let nature take its course.

HELP YOURSELF TO GREATER PROFITS...  
**SPECIFY AND SELL THIS**  
FAMOUS FEATURE-PACKAGED LINE!



# condensing units

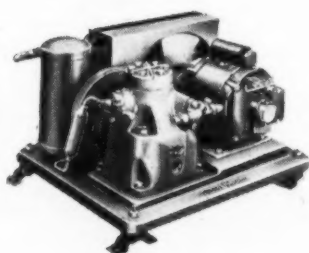
FAMOUS WITH  
CUSTOMERS FOR

- Long life.
- Dependability.
- Low cost, quiet operation.

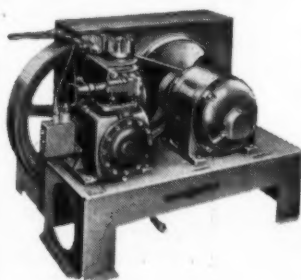
1/6 to 10 HP  
AIR COOLED  
WATER COOLED

Easier to sell because of the many customer-pleasing features:

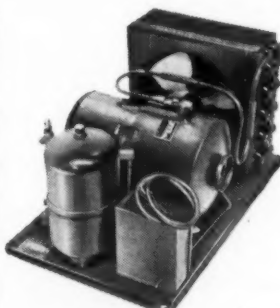
G-E Condensing Units give you valve-in-head, high-compression refrigeration for low power bills, top cooling capacity • Pistons fitted to walls micro-closely for economy • Long-lasting parts such as manganese bronze alloy connecting rods, fine Swedish spring-steel valves, lead-plated copper gaskets • Forced feed lubrication for trouble-free service • Counterbalanced crankshaft for smooth, quiet operation • All are designed for quick and easy installation and maintenance • Compact, neat appearance.



TYPE CW Open Units  
1/4 to 2 HP



TYPE CM Open Units  
2 to 10 HP



TYPE CSS Sealed Units  
1/6 to 1/2 HP

G-E compressor bodies available in sizes from 1/6-10 HP.

**Mail this coupon today!**

General Electric Company, Section AC14,  
Air Conditioning Department, Bloomfield, N. J.

Please send me literature on the units I have checked:

- ☐ Type CW open units 1/4 to 2 HP  
☐ Type CM open units 2 to 10 HP  
☐ Type CSS sealed units 1/6 to 1/2 HP

I am a service engineer ☐ dealer ☐ manufacturer ☐  
contractor ☐

NAME \_\_\_\_\_  
COMPANY \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

### Remember!

Over 1 million G-E condensing units have been built. This acceptance means greater profits for you! Let the famous General Electric name help you sell.

AS ADVERTISED  
IN THE  
SATURDAY EVENING  
POST

GENERAL ELECTRIC

**YOU'LL PROFIT SELLING  
SUPER-COLD  
THE COMPLETE LINE  
OF FOOD STORE  
REFRIGERATION**

Write for new liberal  
Distributor-dealer  
franchise agreement.

THE  
SUPER-COLD  
CORP.  
1020 EAST FIFTY-NINTH STREET  
LOS ANGELES 24, CALIFORNIA



## FTC Ruling on Using Word 'Free' In Ads Clarified by Agency

WASHINGTON, D. C.—The Federal Trade Commission recently clarified its administrative ruling issued on Jan. 30, 1948, on use of the word "free."

The agency said the ruling "does not have the force of law, and was intended only to serve as a general guide for the business community and to outline the circumstances under which the use of the word 'free' and words of similar import are likely to be misleading."

"It must be applied realistically, and hypertechnical applications designed to condemn the use of the word 'free' in advertising under all conditions must be avoided."

The clarifying opinion was issued in connection with the Unicorn Press case. Unicorn Press offered a book "free" to respondents to its advertising who remitted 10 cents for mailing costs. Those who accepted the offer were obliged to order a set of the volumes reserved in their names and were given the privilege of cancellation after examining the first volume.

The trial examiner recommended that Unicorn Press be ordered to cease and desist from such use of the word "free." In rejecting this recommendation, Commissioner William Ayres expressed the "Opinion of the Commission" in part as follows:

### EXAMINER'S OPINION

"On Jan. 30, 1948, the commission issued the following administrative interpretation in regard to the use of the word 'free' to describe merchandise.

"The use of the word 'free,' or words of similar import, in advertising to designate or describe merchandise sold or distributed in interstate commerce, that is not in truth and in fact a gift or gratuity or is not given to the recipient thereof without requiring the purchase of other merchandise or requiring the performance of some service inuring directly or indirectly to the benefit of the advertiser, seller, or distributor, is considered by the commission to be a violation of the Federal Trade Commission Act."

"In the circumstances of this case, Volume I of the encyclopedia is, in fact, given without requiring the purchase of other merchandise."

"It is true that in ordering the first volume the prospective customer must also order a full set at the regular price. But the order for the full set is subject to bona fide cancellation by the recipient of Volume I without in any way obligating him to return that volume or

otherwise to reimburse the respondents.

"The payment of 10 cents is represented as being sufficient to cover only the mailing costs and there is no evidence to the contrary. On the basis of this record, it appears that respondents derive no profit or benefit from this 10 cents and that it goes entirely to the process of delivering the book to the prospective customer."

"Thus, it appears that those who cancel their orders for the full set actually receive Volume I by paying only the delivery costs, without being required to purchase other merchandise and without performing a service which inures to the benefit of the respondents."

### COMMISSION'S OPINION

"The commission is of the opinion, therefore, that all of the terms and conditions of its administrative interpretation have been complied with by the respondents here."

Commenting on the opinion, the National Better Business Bureau reiterated that it "condemns any deceptive use of the word 'free' in advertising. It does not object to the non-deceptive use of the word in advertising."

## Ryan To Direct Bendix Advertising, Promotion

SOUTH BEND, Ind.—Parker H. Erickson, vice president in charge of sales for Bendix Home Appliances, Inc., has announced the appointment of Frank S. Ryan as director of advertising and sales promotion for the company.

Ryan joins the Bendix organization after five years of service with the Apex Electrical Mfg. Co. where he held the post of advertising and sales promotion manager.

Prior to his connection with Apex, Ryan spent seven years with Westinghouse, in various capacities. He handled promotion for domestic refrigeration and home laundry equipment.

Later Ryan was one of the key men assigned to planning the strategy and advertising for the introduction of the Westinghouse automatic washer.

## Westinghouse To Continue Allocation Plan In 1951

MANSFIELD, Ohio—Allocation of appliances to distributors on a one-month-in-advance basis will be continued in 1951 by the Westinghouse Electric Corp. plant here, it has been reported.

A company spokesman said all orders for Christmas deliveries have been received but delivery by that time is not guaranteed.

## Christmas Prospects

### Inactive Paid-Up Charge Accounts Found To Be Plentiful Source of Holiday Profit

LAKEWOOD, Colo.—Ledger sheets indicating inactive, paid-up charge accounts are the source of much extra profit each holiday season for Lakewood Appliance Co. here.

A company employee pulls the sheets from the files and telephones each person listed, suggesting that they buy appliances as Christmas gifts.

The plan was developed by Harry Aldrich, head of the firm, when he noted one day that there were several hundred paid-up accounts included in the company file.

"It occurred to me that it might be easy to sell Christmas gift appliances to these paid-up customers since, with their credit already established, they could order right over the telephone," he said.

"Therefore, I paid a girl \$5 to take out all of the paid-up account sheets, telephone each home, and determine whether the family was still at the same address. We were surprised to find that 99% of them were still available as prospects."

Aldrich's next step was to make up a list (amounting to over 400 names) of these past customers, and split it up equally among all employees of the store, both selling and non-selling. Then, during the entire Christmas season—from Nov. 1 on—each employee was required to call five persons per day.

The employees introduced themselves as Lakewood Appliance Co.'s "gift counselors" and pointed out

that the store had supplied the refrigerator, range, etc., which the family was already using. Then, a list of suggested gifts was read off, followed by the announcement that Lakewood Appliance would deliver immediately, reinstating the old charge account.

"We got sensational results," the dealer declared, "mostly because the prospects remembered us well, and because they would not be billed until after the holidays. Getting an early start helped tremendously, too, as we managed to call most of the former customers when each was beginning to worry about what to give friends and relatives. Around one third of the number telephoned actually came in to look over the suggested gifts and make use of their old charge accounts."

Practically every appliance suggested by the store's salespeople over the telephone was sold before the Christmas week.

"What this stunt actually did was to capitalize on our established goodwill," Aldrich said.

"We think so much of the results that hereafter we are going to run all purchases, cash or charge, on the charge account books, so that we will have a permanent record with name and address on every sale. We'll mark the charge account sheet 'paid' where cash is involved, whereupon it will become a permanent record useful for later Christmas follow-ups."



**CLEANABLE WATER-COOLED CONDENSERS**  
More Efficient Double-Tube Counter-Flow Design

1/2 to 25-Ton Capacity

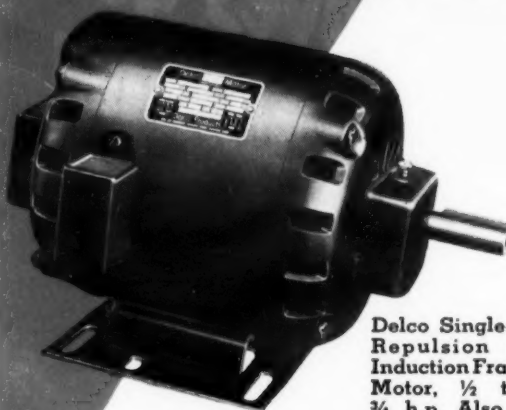
WHOLESALE IN PRINCIPAL CITIES  
Write for Catalog and Prices  
**Halstead & Mitchell**  
BESSEMER BLDG. PITTSBURGH 22, PA.

Send for FREE CATALOG on Your Letterhead

**A WHALE OF A SERVICE!**  
BIG, COMPLETE STOCK OF REFRIGERATION, AIR CONDITIONING & HEATING SUPPLIES, TOOLS & EQUIPMENT  
2 Stores for Better, Faster Service

**SERVICE PARTS CO.**  
MAIN OFFICE • 2511 LAKE ST., MELROSE PARK, ILL.  
BRANCH STORE • 724 BROADWAY, ROCKFORD, ILL.

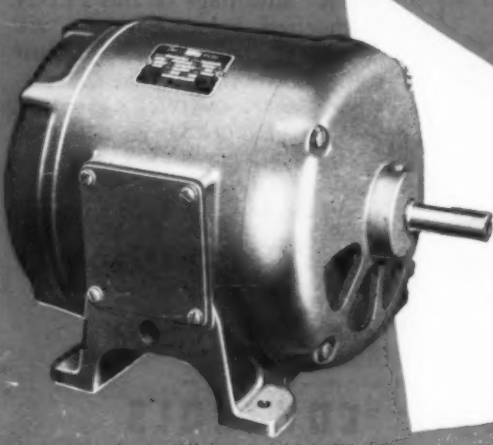
# DELCO MOTORS



Delco Single-Phase, Repulsion Start-Induction Fractional Motor, 1/2 through 3/4 h.p. Also available in these sizes (only) with Condenser start.



Delco Single-Phase Fractional Motor with current-limiting Capacitor, 1/4 through 1/2 h.p. for Blowers and open type Compressors.



Delco Single-Phase, Repulsion Start-Induction Integral Motor, 1 through 5 h.p. Polyphase Integral, 1 through 100 h.p.

## Specifically powered for refrigeration and air conditioning equipment

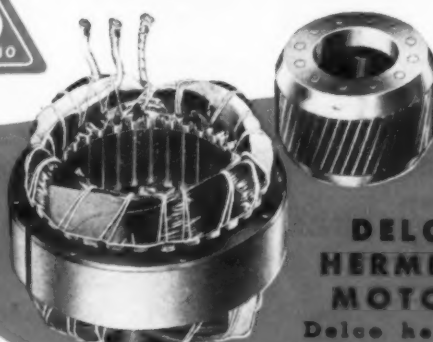
Delco motors—both open type and hermetic—are especially designed and quality-built to meet your individual requirements. They are quiet, long-lived, dependable—are backed by a nationwide service organization with large stocks in the field. For the right answer to your motor problem, write or call Delco Products, Dayton, Ohio, or the nearest sales office.

## DELCO MOTORS

DELCO PRODUCTS  
Division of General Motors Corporation, Dayton, Ohio

Sales Offices: Chicago • Cincinnati • Cleveland  
Dallas • Detroit • Hartford • Philadelphia • St. Louis

New and interesting—MOTORS ON PARADE—a 16 mm film now available for group showings. Write Delco Products for full information.



## DELCO HERMETIC MOTORS

Delco hermetic motors 1/2 horsepower up—split phase, condenser start, condenser start-condenser run—are precision-made to give your products long years of efficient operation.

**Every American Family... NEEDS A SECOND, SMALLER REFRIGERATOR FOR THE HOME • OFFICE • COTTAGE • BOAT • RECREATION ROOM • SMALL APARTMENT, ETC.**

**A WIDE OPEN MARKET FOR DEALER PROFITS!**

**MARVEL Specialized REFRIGERATOR WILL MEET THIS CONSUMER DEMAND 100%**

You can make extra profits when you add the MARVEL 400 to your present lines. There's a bigger market than you may realize for a really good 4-foot unit.

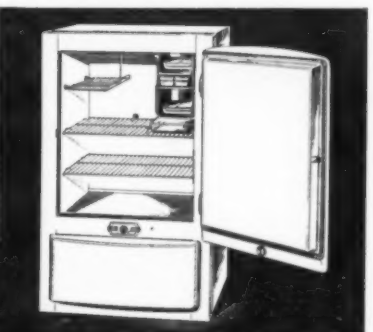
Requires only 23" x 20" floor space. Door opens full 90° even when unit is smack against the wall. Requires no side or back ventilation. Tecumseh hermetically sealed compressor. Underwriters approved!

Needed by doctors for refrigerating penicillin, sulfa, etc. Make multiple sales to apartment houses—both original equipment and replacements—cottages, resorts, etc.

The ideal second refrigerator for the home—recreation room, shop, home bar.

### The Result of 13 Years of Refrigeration Engineering

Marvel has built small, specialized refrigerators since 1937. Superb production facilities in our new, modern plant at Sturgis, designed and built exclusively for refrigerator manufacture. Every unit individually tested. Performance guaranteed.



Write FOR DEALER LITERATURE!  
**MARVEL INDUSTRIES, Inc.**  
Sturgis, Mich.

## They'll Do It Every Time . . . . By Jimmy Hatlo



## Do You Have 'Both Feet On The Ground'?



# This Sign Saves You Time and Money!

## THERE'S A PENN SERVICE STATION NEAR YOU

<b>ARIZONA</b> PHOENIX Hermetic Refrigeration Co.	<b>MASSACHUSETTS</b> MALDEN 48 E. L. Kimball Co. PITTSFIELD Pittsfield Mill & Plumbing Supply Co. SPRINGFIELD Bell Pump Service Co.	<b>NEW YORK</b> ROCHESTER Rochester Fuel Pump Service Rochester Oil Burner Pump & Control Service VALLEY STREAM Sid Harvey, Inc.
<b>CALIFORNIA</b> LOS ANGELES 37 Utility Thermostat Co.	<b>MICHIGAN</b> DETROIT 4 Automatic Equipment Co. FLINT 6 Moore Bros. LANSING Barker-Fowler Electric Company	<b>NORTH CAROLINA</b> BURLINGTON Alley & Radler Service CHARLOTTE 6 Timmons & Son Automatic Controls
<b>COLORADO</b> DENVER 2 H. M. Olmstead	<b>MINNESOTA</b> MINNEAPOLIS Empire Clock Co., Inc. SAINT PAUL Empire Clock Co., Inc.	<b>OHIO</b> AKRON Val-Trol Co. CINCINNATI 10 F. E. Winstel Company CLEVELAND George Baumgardner Ohio Pump Service Company COLUMBUS 15 Columbus Electrical Works DAYTON M & R Electric Motor Service TOLEDO Fred W. Kiemle
<b>CONNECTICUT</b> BRIDGEPORT 7 Sid Harvey, Inc. HARTFORD 6 Bell Pump Service Co. NEW HAVEN Bell Pump Service Co.	<b>MISSOURI</b> KANSAS CITY Fordlund Pump & Machinery Corp. Chas D. Jones Company KANSAS CITY 8 Superior Refrigeration Supply ST. LOUIS Crescent Parts & Equip. Co. Refrigeration Supplies, Inc.	<b>OREGON</b> PORTLAND Industrial Controls Co. Pacific Coast Heating & Appliance
<b>FLORIDA</b> MIAMI Heating Utilities Corp.	<b>NEBRASKA</b> LINCOLN Paramount Supply Co. OMAHA 2 Dennis Refrigeration Supply A. Y. McDonald Mfg. Co.	<b>PENNSYLVANIA</b> PHILADELPHIA Centric Fuel Unit Service Sid Harvey, Inc. Sid Harvey, Inc.
<b>GEORGIA</b> ATLANTA Zuber Electric Co.	<b>NEW HAMPSHIRE</b> LACONIA Palmer Plumbing Supply Co.	<b>RHODE ISLAND</b> PROVIDENCE 4 R. I. Fuel Pump Service Co.
<b>ILLINOIS</b> CHICAGO Robert Barclay, Inc. Braun Bros. Heating Supply PEORIA 2 Conner Company	<b>NEW JERSEY</b> CAMDEN Joseph Shor ELIZABETH 4 Certified Fuel Unit Service HACKENSACK Rhuco Oil Burner Supply Co. JERSEY CITY Control Specialty Co. MERCHANTVILLE Certified Fuel Unit Service NEWARK Certified Fuel Unit Service NEW BRUNSWICK Sid Harvey, Inc. UNION CITY Sid Harvey, Inc.	<b>UTAH</b> SALT LAKE CITY 1 Time & Instrument Co.
<b>INDIANA</b> GARY G. W. Berkheimer Co., Inc. GOSHEN Penn Electric Switch Co. INDIANAPOLIS Hoover-Bowers Co. MISHAWAKA Valley Equipment	<b>NEW YORK</b> ALBANY Albany Burner Control Service BRONX 15 B & D Electric Co. BROOKLYN 5 The J. Hoe Co. CORONA Heating Control Repair Service JAMAICA 2 Sid Harvey, Inc. NEW ROCHELLE Sid Harvey, Inc. NEW YORK 21 Intercity Heat & Power Supply Co. NORTH SYRACUSE Buffalo Pump Service Co. OZONE PARK 16 Atlantic Burner Supply Co., Inc. STATEN ISLAND 2 Automatic Control Service Co.	<b>VERMONT</b> BURLINGTON S. R. Carter Supply, Inc.
<b>IOWA</b> CEDAR RAPIDS Electric Motors Co. DAVENPORT Industrial Engineering Equipment Co. DES MOINES 9 Penn Switch Repair Co. MASON CITY Zack Bros. Electric Co. SIOUX CITY A. Y. McDonald Mfg. Co.	<b>WASHINGTON</b> SEATTLE Pacific Coast Htg. & Appliance Co. Seattle Pump Service Co. SPOKANE Charles A. Black Pacific Coast Htg. & Appliance Co.	<b>VIRGINIA</b> NORFOLK 10 Refrigeration Suppliers, Inc. RICHMOND R. E. Michel Company Refrigeration Supply Company ROANOKE Southern Refrigeration Corp.
<b>KENTUCKY</b> LOUISVILLE 3 Krauth-Campbell Electric Co.	<b>WASHINGTON, D. C.</b> WASHINGTON, D. C. Sid Harvey, Inc. R. E. Michel Company	<b>WISCONSIN</b> FOND DU LAC M. B. Goenther Co. MILWAUKEE 15 Badger Controls Co.
<b>MARYLAND</b> BALTIMORE Sid Harvey, Inc. R. E. Michel Company Roche and Hull, Inc. SALISBURY Roche and Hull, Inc.		
<b>MASSACHUSETTS</b> BOSTON 34 Sid Harvey, Inc. Allison Station BROOKLINE Webster Supply Co. CAMBRIDGE Cronin Supply Co. FRAMINGHAM Oil Heating Supply Co.		

# Penn

## AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

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U. S. Patent  
Office;  
Est. 1926Copyright  
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VOLUME 61, No. 15, SERIAL No. 1,134, DECEMBER 11, 1950

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

## Are the Terms of Opinion Research Designed To Confuse Businessmen?

OCCASIONAL editorials and "Inside Dope" columns in AIR CONDITIONING & REFRIGERATION NEWS have attacked the widespread trust in professional "research" into people's opinions, preferences, etc. We have argued, for example, that such research is based on a fallacious assumption, i. e., that people will tell their real beliefs to a stranger. (On the contrary, they're likely to tell him what they think he wants to hear, or what they think they're supposed to say.)

It has been our contention that all "surveys" should be checked personally by the man who buys them.

Furthermore, it has been suggested that everyone of us who is trying to influence public opinion should get better acquainted with people outside of our social set. Those whom we're hoping to sell and persuade are folks we should know personally and intimately, so that we can learn their habits and prejudices and talk their language.

How can we get to know them better? Answer: by playing with them and doing the things they do in the places where they do them. It is at such times that they reveal themselves.

It is our further contention that opinion researchers, pollsters, and surveyors have surrounded their profession with an aura of false profundity. By wrapping its trappings in a boggledygoon language which puzzles the layman, they impress him inordinately.

The following citation from a study of retail price distribution by the Bureau of Business & Economic Research of the University of Maryland's College of Business & Public Administration is a documentary case which bolsters our position. Read on:

"Inasmuch as many of our decisions regarding sampling, such as size of sample, reliability of averages, and measures of dispersion are dependent upon the nature of the price distributions, it is important to attempt some generalizations about the shapes of those distributions.

"It is assumed that the distribution is described sufficiently if mean, standard deviation, skewness and kurtosis are known, and that it is important to determine how far the distribution departs from normality with respect to skewness and peakedness.

"Since it is essential in any analysis including commodities and a number of cities to employ a measure of skewness that is relatively easy to compute, three measures were considered and their value relationships tested . . . the difference between mean and mode, the third moment, and three times the difference between mean and median,—all measured in terms of the standard deviation."

Are we impressed?

Certainly!

Does any reader know what this palaver means?

Probably not!

Our big point is this: most surveys based on personal interviews and the sampling method should be viewed skeptically and, at times, even suspiciously.

The "mode" of the "moment" can "skew" into a "mean kurtosis" and come out mighty "peaked."

Figures do lie sometimes.

## Packaging Smoked Meats

'Cry-O-Vac' System Permits Centralized Wrapping, Sealing, Yet Effectively Combats Deterioration

CINCINNATI—Use of its Cry-O-Vac system to pre-package smoked meats in a central processing plant was recommended to food chain operators by Dewey & Almy Chemical Co. as a money-saving move.

The company told operators attending the convention of the National Association of Food Chains, held here recently, that they could keep meat such as half hams and ham steaks for several days without deterioration through centralized packaging with the process.

With present packaging methods, loss of weight and color occurs when these meats are exposed to the air for too long a time. For this reason, food chains have had to process the meats in each store so the period of time between processing and sale would not be excessive.

Dewey & Almy presented its story at the exhibit of Schaffer Stores, Mohawk Valley food chain. The two concerns have been developing the packaging system for the past three years.

In the Cry-O-Vac process, newly-cut meat is put in a bag made of an air-and-gas tight film called Cry-O-Rap. This film is produced from a special Dewey & Almy-Dow Saran plastic.

The air is then sucked out of the

bag with a vacuum pump, the bag is sealed, and the package dipped in hot water. The last step shrinks the bag tightly around the meat.

Half hams packed in Cry-O-Rap are claimed to have shown no mold growth and to have been salable at the end of three weeks. There is no weight loss in hams packed in Cry-O-Rap in the same period, it is claimed. Another point made in favor of Cry-O-Rap is that with present packaging methods, cut hams often have to be trimmed several times to remove discoloration.

The material used in the Cry-O-Vac process may cost somewhat more than some materials now being used for meat packaging. But, according to Henry Schaffer, president of Schaffer Stores, the cost of the whole process compares favorably with present methods.

At present, Cry-O-Rap accounts for more than 15% of Dewey & Almy's total volume, compared with a few thousand dollars three years ago. For the six months ended June 30, the company's sales amounted to \$9,003,491.

Sales of the film in 1949 were twice the 1948 figure and volume has doubled again this year. Most of the film sold up to now has been used for frozen poultry.

The company is now attempting to work out a method for the packaging of fresh meats in Cry-O-Rap.

## Clement, Grand Rapids Commercial Firm, Gets Wholesale Parts Setup

GRAND RAPIDS, Mich.—Opening of Clement Electric Distributing Co.'s new wholesale Commercial Refrigeration Supply & Equipment Div. was announced recently by S. B. Gaylord, general sales manager of the company.

At the same time, Gaylord announced the appointment of Herbert J. Bolhouse as sales engineer of the division. A resident of Grand Rapids, Bolhouse was graduated from the University of Michigan where he specialized in refrigeration and air conditioning. He has had several years' experience in this field.

Clement Electric was recently appointed distributor for this area by several manufacturers of refrigeration equipment and supplies, including General Electric. The G-E appointment included naming of the firm as renewal parts depot for western Michigan and distributor of packaged air conditioners, water coolers, and condensing units.

The company also represents Mueller Brass Co., Virginia Smelting Co., and McQuay, Inc. Among other products handled by the firm are Suniso oils, U. S. Rubber Co.'s Rainbow "V" belts and sheaves, Fiberglas Dust-Stop air filters, G-E motors and controls, American Blower ventilating equipment, and Ashcroft gauges.

The new refrigeration business will be closely related to the Automatic Heating Div. opened by Clement Electric in June. In this field, G-E oil and gas furnaces are featured.

These new activities supplement the industrial sales of the company, which has been providing complete industrial electrical equipment service in western Michigan for the past 14 years.

## American Products Seen Influencing Market for Vendors In Great Britain

WASHINGTON, D. C.—Of the new products displayed at the Dairy Industries Exposition held in Atlantic City recently, the vending machines for ice cream and milk and fruit drinks were of greatest interest to the large delegation of visiting Scotchmen, according to J. Findlay Russell, leader of the group.

Russell, retiring president of Dairy Industries Society, International, is now DISI Area Director for Scotland. He commented on the exposition shortly before leaving the United States for his return trip to Scotland.

The vending machines, he said, "have a big future in Britain particularly with the present trade union ideas where jobs must be closed about 6 o'clock at night and restaurants, etc. must close to the by-laws of the town."

"The great development of the lolly-pop (frozen confection) trade was of interest to us particularly since during the past season more or less in Britain this business has been developing among our dependent trade as it has been in the States."

"The promotional and sales methods also attracted much of our attention for it is only during the past season that we in Britain have had any cause to think on some methods of increasing sales."

"It is very disappointing to us to see such delicious displays of fresh fruits set up which we know that at no time in the future could we possibly offer to our market due to the

increased cost of importation, etc. Nevertheless a great deal of similar sales ideas and appeals can be made to serve the British market."

"The display of refrigerated trucks was certainly of interest to us, particularly as our ice cream consumption is increasing, gradually our manufacturers will have to look along the road to increasing deliveries."

## Beck Is Commercial Vice President at Worthington

HARRISON, N. J.—Harold K. Beck has been appointed commercial vice president, in addition to his present post as manager of the Washington office of Worthington Pump & Machinery Corp., according to W. H. Feldmann, vice president in charge of sales.

A 25-year veteran of Worthington, Beck received his BS degree in civil engineering from Tufts college in 1925 and then took the Worthington training course. Originally assigned to the export division, he was transferred to the Washington office the next year as a sales engineer.

In 1933 he was appointed special representative for government contracts and in 1934 he was appointed district manager of the Washington office.

## Supermarket Gets Air Cooling

TAMPA, Fla.—The Gulf Supermarket, Tampa's newest and largest air conditioned market has opened at the corner of 15th St. and Hillsborough Ave.

Worthington air conditioning equipment was installed by Durant Brothers, 2000 Florida Ave. here.

## Burgess Jennings Awarded Richards Memorial Prize For 1950 at ASME Meeting

NEW YORK CITY—The 1950 Richards Memorial Award for outstanding achievement in mechanical engineering was awarded to Burgess H. Jennings, Northwestern university professor, at the annual meeting of the American Society of Mechanical Engineers.

Jennings, chairman of Northwestern's department of mechanical engineering, received a medal and a \$250 cash award in recognition of his work through more than 20 years as teacher and writer in mechanical engineering.

In addition to his work in the development of Northwestern's Technological Institute, Jennings is author or co-author of five widely used college textbooks. Among these are "Air Conditioning and Refrigeration," "Internal Combustion Engines," and "Steam and Gas Engineering."

He also has conducted research in the use of refrigeration and air conditioning to reduce the spread of disease.

A member of the Northwestern faculty since 1940, Prof. Jennings served during World War II with the Office of Scientific Research and Development in providing refrigeration and air conditioning equipment for the armed services.

Active in many professional and engineering groups, he has served as president of the American Society of Refrigerating Engineers and as a Fellow of the American Society of Mechanical Engineers.

Stores More in  
Less Space...  
Cools Faster!

**Speed-Freeze**

bottle beverage  
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**IDEAL COOLER CORPORATION**  
2953 EASTON AVE., ST. LOUIS 6, MO.

## HOLL-INES CAPS

For Sealing Terminal Leaks  
Electrically Insulated

**3.90**

Set of 3 caps

Crosley — Frigidaire

See Your Jobber

HOLL-INES DIST. COMPANY  
92 Hunt Rd. — Chelmsford, Mass.

**CHOICE OF THE INDUSTRY**  
Since 1927

*Quality*

Refrigerator Door Gaskets  
and Accessories

**JARROW PRODUCTS**

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## AIR CONDITIONING UNITS

by

**KRAMER**

**EFFICIENT  
LONG LIFE**

FOUR SIZES  
3-5-7½ and 10  
TON CAPACITY

ADAPTABLE  
for COOLING  
and HEATING

write  
for BULLETIN AC-171

**KRAMER TRENTON CO. Trenton 5, N. J.**



*a Christmas Message from*

**UNIVERSAL COOLER**



Have you noticed that the holiday spirit seems a little remote this year—somewhat removed from where you are?

It's different for several reasons: some men are back into uniform; others will be joining them; things are hard to get. All plans are tentative. There's uneasiness in the air.

Here at Universal Cooler, we've decided that cool heads and warm hearts, coupled with a sincere and honest effort, probably is the best formula for times like these.

We intend to be as resourceful as humanly possible to take care of our good business friends in the uncertain months ahead.

The products we ship will be worthy of the Universal Cooler name.

Preliminary to the job ahead, we're going to humbly count our many blessings and pause in our work long enough to wish all of you a Merry Christmas.

UNIVERSAL COOLER DIVISION

TECUMSEH PRODUCTS COMPANY

MARION, OHIO

### 3 Fined for Violating Price-Cut Injunction

CHICAGO—Charged with contempt of court for violating an injunction restraining them from selling "Toastermaster" products at less than fair trade prices, Michael Baron and Edward Slive, operators of Wholesalers Outlet here, a retail store, were fined \$50 each by Cook County Superior Court Judge Samuel B. Epstein.

Judge Epstein also imposed a fine of \$25 on Frank Richie, a clerk at the store, who allegedly sold a \$21.50 Toastermaster for \$17.55.

McGraw Electric Co. had filed suit against Wholesalers Outlet last fall, accusing the store of selling a Toastermaster for less than the established price.

A consent decree for an injunction without bond was entered last January.

### American Central Selects New Western Sales Mgr.

CONNERSVILLE, Ind.—Charles K. Clarke, veteran kitchen and appliance executive, is the new western regional sales manager for American Kitchens, it has been announced by F. F. Duggan, general sales manager of American Central Div., Avco Mfg. Corp.

Clarke, until recently was sales manager of Kitchen-Kraft Products, Midwest Mfg. Corp., Galesburg, Ill. Clarke's headquarters are at 564 Western Merchandise Mart, San Francisco.

### Sales of 4 Appliances In Nashville Drop Sharply In 1st Month Under 'W'

NASHVILLE, Tenn.—In the first full month after the imposition of Regulation W, Nashville dealers found their sales of four major appliances cut sharply below those of September, figures released by the Nashville Electric Service revealed.

The utility's figures revealed that appliance dealers sold 689 refrigerators, freezers, ranges, and water heaters during October as compared with 1,800 units of such products in September and 1,449 in October, 1949.

However, in computing its statistics, the utility indicated that where contractors, housing projects, plumbers, and miscellaneous outlets sold 24% of the appliances in October last year and 26% in September, they sold 55% in October, 1950.

In other words, of the 1,515 units sold in October, this miscellaneous group sold 826 units compared with the appliance dealers' 689. In September the ratio was 619 for the miscellaneous group and 1,800 for the dealers.

During October, total refrigerator sales were down 53% from September and 43% from October of last year. Range sales were off 37% and 21%, respectively. Freezer sales were down 26% and 8%, respectively. Water heater sales 16% under September, but 18% higher than October, 1949.

In the case of water heaters, however, all but 99 of the October total was sold by the miscellaneous group.

### REFINISHING TRADE-INS:

Used Units Sell Better After Expert Gives 'em 'New Look'

HAMBURG, N. Y.—Kronenberg's, Inc., here, has inaugurated a new refinishing operation in connection with its used appliance business which has added greatly to the salability of trade-in merchandise.

The store has made arrangements with a local refinishing expert who works on an independent basis with several appliance dealers in the Buffalo area. This craftsman charges the store \$5 a unit for spraying new enamel finishes on used refrigerators, ranges, and other appliances acquired on trade-in deals.

A spokesman for the appliance department reported that new finish on used appliances has increased their consumer acceptance and salability

tremendously. It was pointed out that the bright, new white finish takes away the "used" look which often acts as a barrier to consumer interest.

The spraying work is done by the finishing expert on the store premises. He has been engaged in this field for many years. It was pointed out that refinishing appliances requires expert knowledge and is a type of work that can't be handled by the average untrained repairman.

By paying \$5 to have a used refrigerator refinished, Kronenberg's is able to get substantially more for the unit than if it were sold in its original state, it was reported.

The refinishing service also ties in with the store's general policy of offering only top values in reconditioned appliances, it was pointed out. Kronenberg's stands behind every used appliance it sells and applies the same service principles to its used and traded-in items as it does to new appliances.

Used appliances are displayed in a straight line setup under a specially constructed canopy at the rear of the store, away from the new appliance section. In this way the used merchandise does not detract from the new appliance business and at the same time presents a pleasing display for customers who ask specifically to look at trade-in merchandise.

### Thornton of Westinghouse Receives McGraw Award

NEW YORK CITY—Frank Thornton, Jr., engineering manager, association activities, Westinghouse Electric Corp., has been awarded the James H. McGraw Award, Manufacturers Medal for 1950. The award was presented at a luncheon held in Atlantic City on Nov. 15 during the meeting of the National Electrical Manufacturers Association.

Thornton received the award in recognition of his distinguished contribution to the advancement of the electrical industry in the field of standardization, code development, and safety regulations.

The award consists of a bronze medal and \$100 purse.

### Employer Didn't Violate Taft-Hartley Law By Firing 5 for Slowdown, NLRB Decides

WASHINGTON, D. C.—The National Labor Relations Board has ruled unanimously that an employer did not violate the Taft-Hartley law by discharging five employees who had engaged in a concerted slowdown following a wage reduction.

The board held that the decreasing of production by the five, while remaining on the job, did not come within the protection of the section of the law which guarantees employees the right to engage in concerted activities for the purposes of self-organization or collective bargaining.

It was the first ruling by the board on this particular point, but the board reached its decision by applying principles laid down in earlier decisions of the board, the U. S. Courts of Appeal, and the Supreme Court.

The board's decision was made in a case involving the Elk Lumber Co. of Medford, Ore. The company discharged five employees, who were loading lumber into railroad cars, because they engaged in a slowdown after the company reduced their wages. The wage reduction followed a change in the company's system of loading.

In holding that the five-employee

slowdown was not protected by the law, the board quoted the following from a decision of the U. S. Court of Appeals for the Eighth Circuit:

"While these employees had the undoubted right to go on a strike and quit their employment, they could not continue to work and remain at their positions, accept the wages paid them, and at the same time select what part of their allotted tasks they cared to perform of their own volition, or refuse openly or secretly, to the employer's damage, to do other work."

The board's opinion said further: "Section 7 of the Act guarantees to employees the right to engage in concerted activities for the purpose of collective bargaining or other mutual aid or protection. However, both the board and the courts have recognized that not every form of activity that falls within the letter of this provision is protected. The test . . . is whether the particular activity involved is so 'indefensible' as to warrant the employer in discharging the participating employees. Either an unlawful objective or the adoption of improper means of achieving it may deprive employees engaged in concerted activities of the protection of the Act."



**Any way, shape, or form  
It's Bundyweld for better refrigeration!**

In coils or condensers. In compressors, evaporators, or refrigerant lines.

Whatever your application, Bundyweld spells more advantages than any other tubing. It's double-walled from a single strip, copper-brazed through 360° of wall contact! A stronger, lighter-weight, easier-handling tubing that forms like a charm and takes more pressure in your tubing part!

Too, Bundyweld's double walls mean thinner walls for faster heat conductivity; finer, more dependable performance for the life of your refrigerators, home or commercial

freezers, display cases, refrigerated cars, whatever you make that calls for refrigeration tubing.

#### Foiled by a coil?

Then bring that tricky bend to Bundy, where exclusive, patented bending machines can roll out formed tubing parts to perfection, ready for your assembly lines. When a given bending fixture doesn't exist, Bundy engineers will often design a new one to lick the knottiest bending problems. Get the complete story from a Bundyweld distributor listed below. Or write: **Bundy Tubing Company, Detroit 14, Michigan.**

# Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

#### WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of basic metal, coated with a bonding metal. Then it's . . .



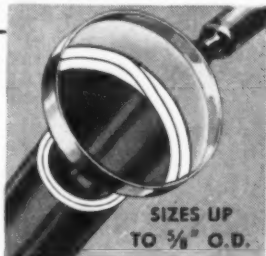
continuously rolled twice around laterally into a tube of uniform thickness, and



passed through a furnace. Bending metal fuses with basic metal, presto—



Bundyweld . . . double-walled and brazed through 360° of wall contact.



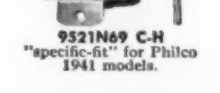
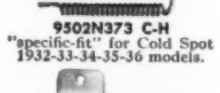
NOTE the exclusive patented Bundyweld beveled edge, which affords a smoother joint, absence of bead and less chance for any leakage.

Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 2, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • Chicago 32, Ill.: Lopham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Rutan & Co., 404 Architects Bldg. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 3628 E. Marginal Way Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 881 Bay St. • Bundyweld nickel and Monel tubing is sold by distributors of nickel and nickel alloys in principal cities.

## all under ONE ROOF!



Here are typical examples from the broad line of C-H "specific-fit" refrigerator replacement controls.



**"SPECIFIC-FIT" replacement units for more than 1000 different refrigerator models**

The Cutler-Hammer Refrigeration Control Catalog shows "specific-fit" replacement control units not just listed but *manufactured* for more than 1,000 individual refrigerator models which the industry has produced since 1925. Save time and trouble—no "modifying", no fussing, no compromises. Make the C-H catalog your standard "guide", and C-H "specific-fit" replacement control units your standard line. And you'll also quickly see how the widely-known Cutler-Hammer name (advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. The C-H refrigeration control catalog, as well as the items you need, are available through your authorized C-H refrigeration wholesaler. Do not forget, this C-H refrigeration control line includes the outstanding *general purpose* replacement control (9521N9) for use with motors having "built-in" overload protection. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin.



Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast.

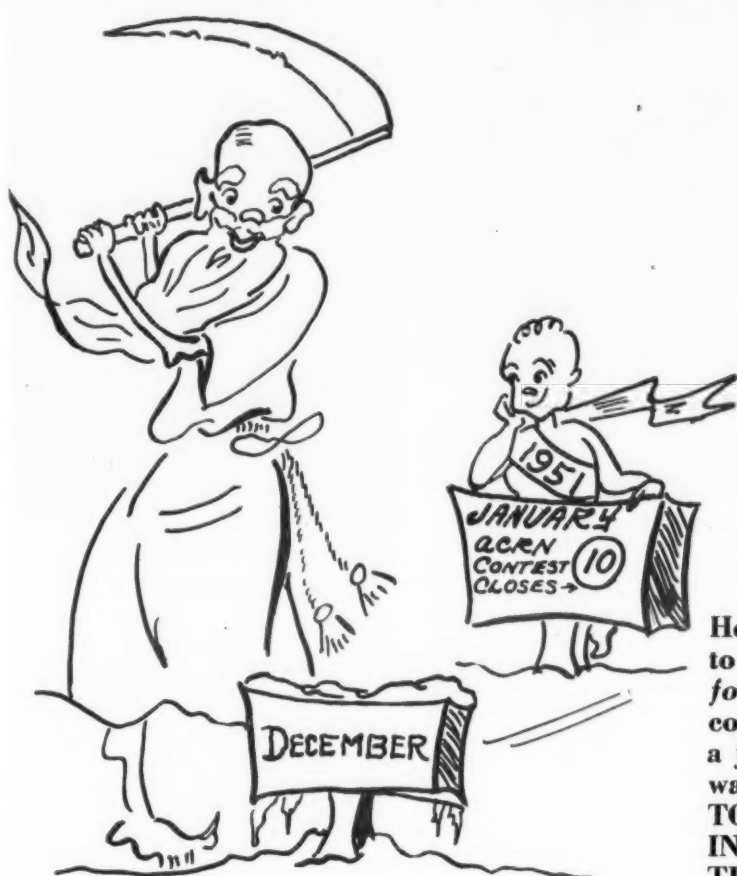
# Just One Month To Go!

Send Your Entry TODAY

AIR CONDITIONING & REFRIGERATION NEWS

## \$1,000.00 PRIZE CONTEST

FOR *Your* MOST UNUSUAL AIR CONDITIONING INSTALLATION



Here's Your Chance to Make a Real Contribution to the Air Conditioning Industry—and *Get Paid for Doing it!* Every air conditioning dealer and contractor has at one time or another installed a job that appealed to him as an odd or unusual way to use air conditioning. **ALL YOU HAVE TO DO IS TELL US ABOUT YOUR "PET" INSTALLATION. THAT'S WHAT THIS CONTEST IS ALL ABOUT.**

Maybe your favorite job was installed in a factory . . . a special production problem. Maybe

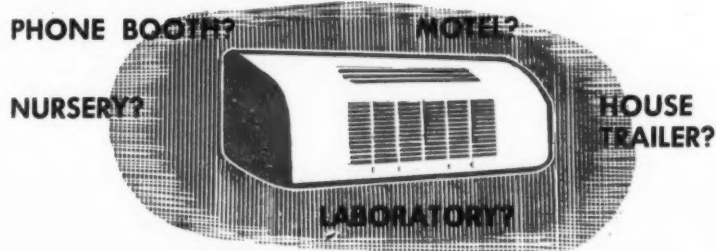
it was in a greenhouse to assist the growth of a rare flower or vegetable. House trailer? Tobacco barn?

You must have the records on some such installation in your filing case or in the back of your mind. Drag out the details and make them win a prize for you.

It's easy to enter and you have a good chance to win. All you have to do is follow three simple rules to qualify for 75 valuable prizes. You can submit as many entries as you want . . . so let's go!

## THREE CONTEST DIVISIONS—You Can Enter ALL THREE

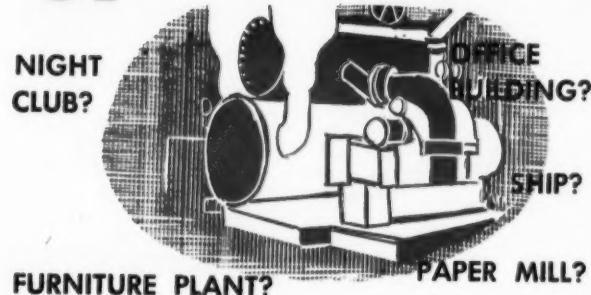
### 1. ROOM COOLER (2 H.P. AND BELOW)



### 2. PACKAGE UNIT



### 3. CENTRAL STATION



*Who Can  
Enter?*

This competition is open to all bona fide air conditioning dealers or contractors and their employees—whether salesman, installation man, or bookkeeper. Only requirement is that the entrant have participated in some way in the installation submitted.

One person can submit as many entries as desired in any one or all three categories.

### FOLLOW THESE SIMPLE RULES

1. Submit a picture of the installation to illustrate its unusual aspects.
2. Write up a brief—but complete—description of the installation including the following information:
  - a. Customer's name and address.
  - b. Type and name of air conditioning equipment used.
  - c. What job is the equipment intended to do on this installation?
  - d. In what way is the application unusual?
  - e. What installation problems, if any, were involved?
  - f. How was the sale made?
3. Mail the picture and description to CONTEST EDITOR, AIR CONDITIONING & REFRIGERATION NEWS, 450 W. Fort St., Detroit 26, Mich. for arrival Jan. 10, 1951. No entries received later than midnight, Jan. 10 will be considered.

Entries will be judged on the basis of the unusual nature of the application. When a decision is close, the judges will then consider the completeness of the description in making the awards.

Duplicate prizes will be awarded in case of ties.

All entries become the property of AIR CONDITIONING & REFRIGERATION NEWS.

#### WHO WILL JUDGE THE CONTEST

- Y. CARTER  
Detroit Lubricator Co.
- GEORGE CLARK  
Detroit Air Conditioning Institute
- I. A. HARTY  
Wolverine Tube Div.,  
Calumet & Hecla Consolidated Copper Co., Inc.
- GEORGE F. TAUBENECK  
Air Conditioning & Refrigeration News
- PHIL B. REDEKER  
Air Conditioning & Refrigeration News

### Why This Contest?

AIR CONDITIONING & REFRIGERATION NEWS believes that what may be considered a unique application of air conditioning today could open up a whole new vista of sales and profit possibilities for the entire industry tomorrow! We also believe that it is to the industry's advantage to know about such installations *right now*.

As its contribution to the advancement of the air conditioning industry, AIR CONDITIONING & REFRIGERATION NEWS plans to give the widest possible publicity to the information submitted in this contest.

The success of the contest depends on the full participation of the industry's field forces . . . the men who are out selling and installing room coolers, package units, and central station systems. That means you!

**NOT MUCH TIME! Contest Closes  
JANUARY 10, 1951**

Start digging up the case histories of your pet installations today and send in your entries right away!

Winners Will Be Announced In the January 22

Issue of AIR CONDITIONING &  
REFRIGERATION NEWS

### HERE ARE THE PRIZES

PRIZE	DIVISION Room Cooler	Packaged Unit	Central System
First	\$100	\$100	\$100
Second	50	50	50
Third	25	25	25
Next 10	10	10	10

Next 12 best entries in each division will be awarded a copy of George F. Taubeneck's newest "laugh while you learn" selling book, "Both Feet on the Ground."

#### SEND IN THIS COUPON (OR A FACSIMILE) WITH YOUR ENTRY

AIR CONDITIONING & REFRIGERATION NEWS  
450 W. FORT ST., DETROIT 26, MICH.

Here is my entry in the unusual air conditioning application contest.

Picture is: attached ☐ sent under separate cover ☐

Please enter me in the following division:

Room cooler ☐ packaged unit ☐ central system ☐  
(As many separate entries may be made as desired.)

Name .....

Firm .....

Street & No. ....

City ..... State .....

Please ☐ Distributor ☐ Dealer ☐ Contractor

Check ☐ Service ☐ Other .....

# TYPHOON

Specialists in Packaged  
**AIR CONDITIONERS**  
1½ TO 20 TONS

Evaporative Condensers  
3 TO 20 TONS

Backed by more than 40 years  
of air cooling experience

**TYPHOON Air Conditioning Co., Inc.**  
794 Union Street, Brooklyn, N. Y.

## DEPENDABLE QUALITY



The wide acceptance of Standard's Counter-flow Condensers proves their dependable quality. Sizes from ½ to 15 h.p. Used by refrigeration men for more than a quarter century.

Write for Bulletin C-3.

**STANDARD REFRIGERATION CO.**  
332 S. Hoyne Ave., Chicago 12, Ill.

**STANDARD** STAINLESS STEEL EVAPORATORS, LIQUID RECEIVERS, COUNTERFLOW CONDENSERS, SHELL AND COIL CONDENSERS



## UNILECTRIC WIRING KNOW-HOW

**Hamilton Manufacturing Company**  
Two Rivers, Wisconsin  
November 6, 1950

United Manufacturing and Service Co.  
405 South Sixth Street  
Milwaukee 4, Wisconsin  
Attention: Mr. T. A. Vallee  
Sales Manager

Dear Mr. Vallee:

Again I am pleased to write you with regard to the success we have had since placing the production of wiring harnesses in your hands a few years ago.

There is plenty of evidence supporting the fact that "Unilectric" assemblies have aided materially in reducing our cost all along the line. We immediately enjoyed savings you made possible because of your improved facilities, greater buying volume of wire and the engineering experience you have acquired over the years you have been in business. These advantages, together with your excellent production control methods for greater productive efficiency we think has been responsible for keeping our cost of wiring harnesses at the lowest possible figure.

Actually it seems silly now that we should ever have tried to make our own wiring assemblies. Experience has proved that you can make these assemblies at a lower cost than we could ever hope to make them here.

Kindest regards.

Yours very truly  
**HAMILTON MANUFACTURING COMPANY**  
*J. P. Everson*  
J. P. Everson  
Assistant Purchasing Agent

This report from Hamilton Mfg. Company, Two Rivers, Wisconsin, is typical of the way UNILECTRIC Wiring Systems are reducing costs for 136 leading manufacturers including 65 manufacturers of refrigeration equipment. It costs you nothing to find out how UNILECTRIC — "Nation's Wiring Headquarters" — can serve you best. Write for further details.

**UNILECTRIC**  
UNITED MANUFACTURING & SERVICE CO.  
407 South Sixth Street, Milwaukee 4, Wisconsin  
DESIGNERS AND MANUFACTURERS OF UNILECTRIC WIRING SYSTEMS AND COMPONENTS

AUTOMATIC CLOTHES DRYERS • WOOD AND STEEL EQUIPMENT FOR PRINTERS  
ENGINEERS, DENTISTS, PHYSICIANS, CHEMISTS, NURSERIES, SCHOOLS, LIBRARIES, HOSPITALS.

## What's New

When requesting further information on new products, please use "Information Center" form.

### Cornell-Dubilier Offers 'Smallest' Capacitor

KEY NO. P-1221

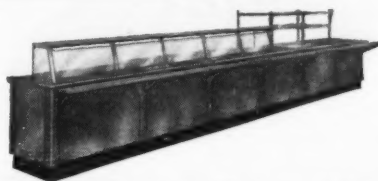
SOUTH PLAINFIELD, N. J. — A new electrolytic motor starting capacitor, believed to be the smallest yet made available, has been introduced by Cornell-Dubilier Electric Corp. here.

Known as Type ETB, this capacitor is small enough to be tucked away in the motor end-bell or base. The aluminum container measures 1½ in. in diameter and 2½ in. in length. The insulating tube adds ¼ in. to diameter and ⅝ in. to length of the unit.

Type ETB will operate on 110 volts, 60 cycles intermittently and is rated at a maximum of 60 one-second starts per hour. It is also used for low-voltage sub-fractional capacity start, capacity run motors where operation is intermittent and where the voltage across the capacitor does not exceed 45 volts, the company reports.

Capacities and voltage ratings are as follows:

Type ETB 70-3, 64-72 mfd., 110-v. a.c.; ETB 78-2, 72-87 mfd., 110-v. a.c.; ETB 95-1, 86-106 mfd., 110-v. a.c.; ETB 110-1, 107-129 mfd., 110-v. a.c.; ETB 130-3, 124-138 mfd., 110-v. a.c.



### 'Kold-Kase' Counters Have 2 Exclusive Features

KEY NO. P-1222

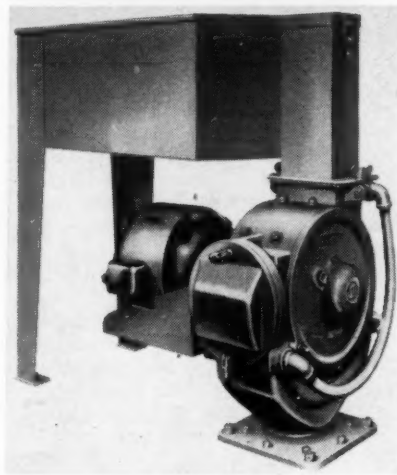
CHICAGO — A selection of stainless steel refrigerated display counters for restaurant and cafeteria installation has recently been added to its line by the Leitner Equipment Co. here.

The new "Kold-Kase" units are available in a variety of models, consisting typically of a refrigerated base, a refrigerated middle section (for salad, whipped cream pies, and the like) and a non-refrigerated top section.

Two exclusive features claimed by Leitner are a middle section refrigerated by a direct expansion fin coil, and the extra depth of this refrigerated middle section which permits the interchangeable arrangement of as many as 27 pans at once.

The "Kold-Kase" models are sold with or without upper display section, with or without wall backing and shelves, with or without built-in water station.

### Garbrider Handles Waste For Commercial Users



KEY NO. P-1223

COLUMBUS, Ohio — Designed to grind and dispose of all waste incidental to food preparation, the Garbrider produced by Jeffrey Mfg. Co. is proving of considerable interest to restaurants, institutions, and supermarkets, according to Pick-Edmunds & Co., national distributor with headquarters here.

The Garbrider is claimed to provide the answer to three important problems in food handling: costs, waste, and sanitation. By doing away with the need for garbage storage space and cans, as well as reducing labor, costs can be cut, it is said. Waste is eliminated by recovery of fat silver and closer inspection of foodstuffs thrown away. Further, it is claimed, the unit eliminates the chief source of rats and flies in and around kitchens.

Two models are available, the G-126-A and the smaller G-64-A. The larger unit is powered by a three-phase 5-hp. motor driving a hammer-mill type waste disposing unit. There is a receiving hopper for removing silverware or other foreign material before feeding to the feed chute through a counter-weighted door.

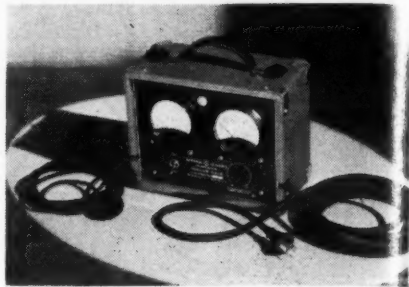
Spray pipes are provided to flush garbage through the machine and into the sewage system. A metal trap is incorporated in the larger model to prevent damage should foreign matter be overlooked by the sorter.

The smaller model, G-64-A, powered by a 2-hp. motor, is of the grinding type and includes a chute so

it can be installed under a scrapping or dishwashing table if desired. The hopper table is optional equipment. Although no metal trap is provided, this model is so designed that the machine stops if silverware is accidentally dropped into it.

Rated capacity of this model is 400 to 500 lbs. per hour, while the large machine will dispose of 1,000 to 2,000 lbs. per hour, depending on how much hard material has to be ground, the company states.

### G-E Vacuum Gauges Give Accurate Measurements



KEY NO. P-1224

SCHENECTADY, N. Y. — A redesigned line of thermocouple vacuum gauges for industrial, laboratory, and other applications where vacuum must be accurately measured has been announced by General Electric's meter and instrument divisions.

Included in the line are a 115-volt, a.c., portable thermocouple vacuum gauge, and types for both rack and panel mounting. All but the rack-mounted type have been designed to operate either from 115-volt a.c. or from No. 2 flashlight batteries.

Usable on either glass or metal vacuum systems, the gauges give a continuous indication of pressure and respond almost instantly to pressure changes. Pressure can be read directly from a scale calibrated from 0-200 microns.

In the 1-100 micron range, the instruments are accurate within 10% of the reading or 1 micron, whichever is greater.

The gauge is connected to the gauge tube electrically; hence, it may be disconnected from the tube without disturbing the vacuum system. The gauge tube may be interchanged without recalibration.

The vacuum-gauge tube is built to withstand damage if accidentally operated at atmospheric pressure.

## Information Center

Here is an easy, convenient way for you to get more information on "What's New" items and on products advertised in this issue of AIR CONDITIONING & REFRIGERATION NEWS. New literature and catalogs available to readers can also be obtained by using the form below. Your requests for this information will be forwarded promptly by the NEWS.

In requesting additional information on "What's New" and "Current Literature Available" items, please use Key Nos. shown on these items.

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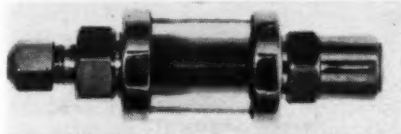
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## What's New (Con't)

### Cee-Kleer Produces New Smaller Size Indicator



KEY NO. P-1225

CINCINNATI—Redesigned to save material and thus permit a reduction in price, new models have been added to its line of liquid indicators by Cee-Kleer Products Co. here, announces Phil Baird, head of the company.

Outside dimensions of the new indicators have been made smaller to reduce the material used, but there have been no changes made in the inside dimensions so that no pressure drop is encountered with the device, the company claims, minimum inside diameter remaining at 7/16 in.

At the present time the new indicators are being made available in 1/4, 3/8, and 1/2-in. sizes with either male to male or male to female connections.

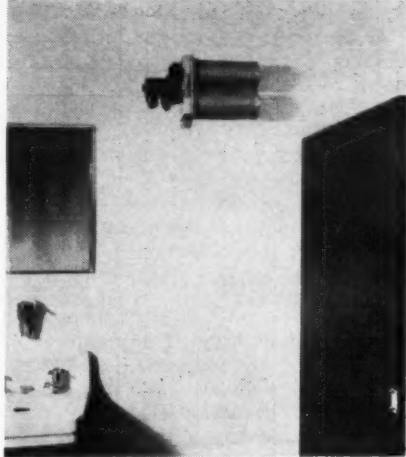
The manufacturing company is also contemplating producing the new models in a full range of larger sizes, including 3/4, 1, 1 1/2, and 1 3/4-in. These larger sizes would save sweat ends.

The previous line of Cee-Kleer indicators will be continued along with the new smaller models, it was also announced.

A major feature claimed for both the new and earlier Cee-Kleer indicators is the full 360° vision permitted by the design. High quality gauge glass bearing on fiber asbestos gaskets, it is claimed, gives a safe indicator that will not leak.

The company also claims that its indicators will prevent heavier particles from getting into the expansion valve screen, will show flow of refrigerant, and indicate an excess of oil in the system.

A line of driers incorporating the sight indicator at the outlet end is also being manufactured by the company.



### Small Air Purifier Can Be Used In Lavatories

KEY NO. P-1226

NEW YORK CITY—Among the practical uses for its small, activated carbon air purifier, lavatory, and toilet area applications have been found to be especially successful, says W. B. Connor Engineering Corp.

Called the "Air Improver," the unit is essentially an indoor ventilating device. Continuously drawing the room air through activated carbon to remove any odors and discharging a steady stream of pure air, it adds to the normal ventilation air supply. The "Air Improver" does not change the air in any way except to filter out impurities.

In a rather severe test in a poorly ventilated lavatory of an office occupied by 25 persons, but planned for not more than 10, the air quality was improved very noticeably, the company declares.

Design is simple, consisting of two metal canisters containing 3 lbs. of activated carbon, and a quiet 3,000 r.p.m. motor-blower which circulates the air at the rate of 60 c.f.m. In a room measuring 1,000 cu. ft. this would mean that all the air in the space is completely purified three and one half times an hour. Over-all length is 18 in. and it may be fastened at any convenient spot. It uses no more electricity than a small light bulb.

## Current Literature Available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

### Book Describes Farm Electrical Equipment

KEY NO. L-1221

NEW YORK CITY—Edison Electric Institute has announced publication of the *Farm Electrical Equipment Handbook*.

This 224-page, 6-in. by 9-in. volume presents in non-technical language, descriptions of electrical farm equipment, together with many illustrations, and the purchase price ranges and kw-hr. consumption of each piece of equipment.

It also contains a list of manufacturers for each piece of equipment discussed and an extensive bibliography of over 450 publications dealing with the applications which are described.

Primarily designed as a practical working tool for rural representatives and county extension workers, farm electrical equipment dealers should also find the handbook valuable both as a sales stimulator and as a practical reference work, the institute said.

Orders for the book should be addressed to Edison Electric Institute,

420 Lexington Ave., New York 17, N. Y. The price of single copies is \$2.25 postpaid. A schedule of prices may be obtained on request to the institute.

### Folder Tells Sales Story On New G-E Dishwasher

KEY NO. L-1222

BRIDGEPORT, Conn.—A consumer broadside which tells the sales story of the new General Electric automatic dishwashers has been published by the company for retailers' use.

The folder serves as a direct-mail piece, handout, or when opened up, as a wall or window poster. It is built around the sales message, "It's Easier Than You Think."

When opened up for use as a poster, the four-color broadside measures 18 in. by 31 in. It explains new design features and operation of the dishwasher.

The new piece is part of a package of advertising and sales promotion materials which will be made available by the company to introduce its new dishwasher.

### Filtrine Offers Manual On Water Conditioning

KEY NO. L-1223

BROOKLYN—A new procurement manual presented by Filtrine Mfg. Co., here offers guidance in selecting complete drinking water conditioning equipment for operation in all food service establishments—from the five-stool snack-bar to the skyscraper-hotel.

Designed for operators, specification writers, and layout men, the 12-page book is entitled "Chilled Water for Modern Food Service." It presents in non-technical terms the diversity of experience derived in Filtrine's 40 years of specializing in drinking water for restaurants.

The manual analyzes requirements of the various types of commercial, school, factory, and office eating places, supplies data on the kinds and capacities of equipment, and blueprints procurement to the writing of specifications. Diagrams of special applications show the functional elasticity of equipment and furnish a variety of ideas for space conservation and operating economy, according to the company.

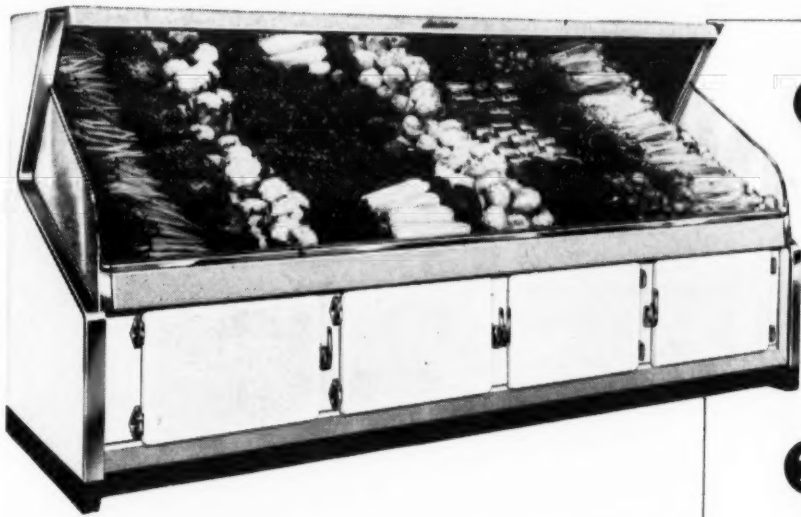
### New Bulletin Covers Madden Tube Fittings

KEY NO. L-1224

CHICAGO—Madden Brass Products Co. has recently issued a new bulletin on compression tube fittings that gives full engineering and price data on the complete BMP line.

Called Bulletin No. 50-CF, the book included illustrations of each fitting.

## What's new from McCray to help you sell more grocers?



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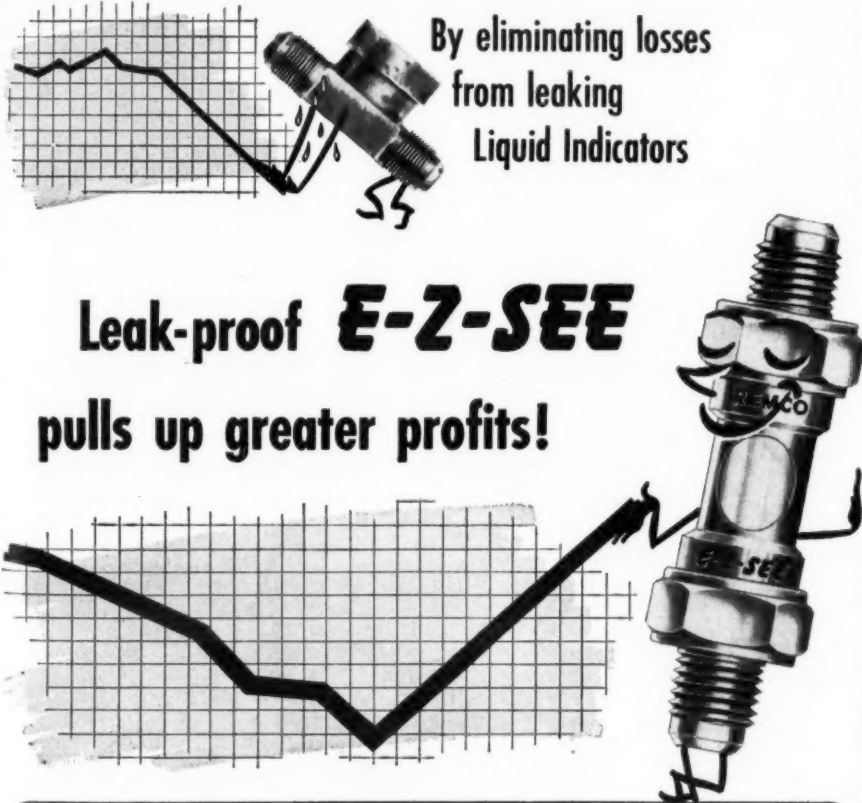
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# McCray

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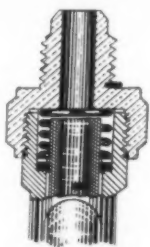
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By eliminating losses from leaking Liquid Indicators

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E-Z-See available in connection sizes 1/4", 3/8" and 1/2"—in male flare both ends; one end female and one end male; or sweat connections to permit soldering without disassembling.

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# Servicing the New Philco Room Air Conditioners

## PART 9 How To Replace Refrigeration Units

### REPLACING SUPER POWER SYSTEM

In case of failure of the Super Power system, the entire refrigerant unit should be removed from the air conditioner, and a new unit should be installed in its place.

The Super Power system to be replaced should not be removed from the air conditioner until the crate containing the replacement unit is on the premises.

### UNIT REPLACEMENT PROCEDURE—MODEL 50-F

For removing a defective unit and installing a new one, two steel lifting frames are used.

To make the change, the services of two men are required. The procedure given below should be followed.

1. Remove the screws which hold the replacement unit crate to its skid, and lift off the entire crate.
2. Lift off the extra frame from the replacement unit.
3. Remove the nuts and washers holding the replacement compressor down to the skid.
4. Take the air conditioner out of the window, and remove the decorative casing, top panel, side panels, and evaporator air deflector.
5. Remove the condenser plenum

cover, and take out the sheet metal screws holding the condenser coil to the bottom pan.

6. Remove the sheet metal screws securing the evaporator to the evaporator plenum and pan assembly.

7. Remove the screws securing the switch box to the evaporator plenum, and remove the box cover.

8. Disconnect the power and fan motor leads inside the switch box, and re-assemble the box.

9. Swing the switch box over to the fan side of the compressor before attaching the lifting frame.

10. Place the extra lifting frame on top of the unit, and secure the clips to the coil end sheets, then place one hook under each leg of the compressor. Note that there are left-hand and right-hand hooks.

11. Draw up the nuts on the hooks, finger tight, then remove the two bolts securing each compressor mounting bracket to the bottom drain pan. Take off the nuts which fasten the inside compressor mounting brackets to the bottom pan partition.

12. Tighten the lifting-hook nuts, then lift the refrigerant system out of the air conditioner, and set it on the floor.

13. Secure the switch box to one of the lifting frame cross members with tape or heavy wire.

14. Lift the replacement unit off

**EDITOR'S NOTE:** Summer may be gone in some parts of the country, but that doesn't make much difference to many window and room air conditioners, because the users are apt to turn them on almost any day in the year for ventilation if not for cooling. Thus the accompanying data on servicing the 1950 line of Philco air conditioners is timely. (Besides, it can be clipped and filed for future reference.)

This is the ninth installment in the series that is being published by AIR CONDITIONING & REFRIGERATION NEWS with permission of Philco Corp. and cooperation of Ed. Barth, manager of Philco refrigeration service.

the skid, and place it in the air conditioner, making sure that the condenser end sheets slide down the guides on the condenser plenum.

15. Re-assemble the parts by reversing the procedure above. Connect the wiring.

16. Fasten the defective unit to the skid, and assemble the crate.

### UNIT REPLACEMENT PROCEDURE—MODEL 75-F

For removing a defective unit and installing a new one, two steel lifting frames are used.

To make the change, the services of two men are required. The procedure given should be followed:

1. Remove the screws which hold the replacement unit crate to its skid, and lift off the entire crate.
2. Lift off the extra frame from the replacement unit, and loosely assemble the auxiliary parts to it. These parts are in the cloth bag.
3. Remove the nuts and washers holding the replacement compressor down to the skid.
4. Take the air conditioner out of the window, and remove the decorative casing, top panel, and side panels.
5. Remove the filter.
6. Remove the condenser plenum cover, and take out the sheet metal screws holding the condenser coil to the bottom pan.
7. Remove the evaporator plenum pan assembly, the baffle plate, and the filter clips. Take out the sheet metal screws holding the evaporator coil to the chassis parts.
8. Take out the screws which hold the switch bracket to the pan, and disconnect the power cord and the fan motor cable at the switch. Disconnect the wires at the compressor motor terminal box, and lay the switch bracket aside.
9. Remove the nuts and bolts holding the compressor mounting legs to the pan.
10. Attach the extra lifting frame to the coil end sheets, and then to the compressor. It will be necessary to tilt one end of the evaporator coil about 1/4 in. to make clearance for sliding the fastener under the lower flange of the coil end sheet. This is easily done by hooking a finger through one of the return bends, and lifting the coil upward.
11. Wire the switch bracket to the lifting frame for return to the factory.
12. Grasping the lifting frame (two men), lift the unit to be replaced out of the air conditioner, and set it on the floor.

**NOTE: WHEN REMOVING AND INSTALLING THE UNIT, USE EXTREME CARE TO MAKE SURE THAT THE COMPRESSOR MOUNTING LEGS DO NOT TEAR OR SCAR THE INSULATION.**

13. Lift the replacement unit off the skid, and place it in the chassis. Be sure that the condenser end sheets engage the flanges of the condenser plenum.

14. Connect the wiring.

15. Fasten the inoperative unit to the skid, and assemble the crate.

(To Be Continued)

## Stauffen, Nash-Kelvinator Director, Dies In East

ENGLEWOOD, N. J. — Ernest Stauffen, a director of Nash-Kelvinator Corp., died here November 29 at the age of 67.

He became a director of Kelvinator Corp. in 1926 and then upon the merger of Nash Motors and Kelvinator, he was made a director of the new corporation.

He had a long and distinguished career in law, banking, and industry. At the time of his death, Stauffen was chairman of both the finance committee and the trust committee and a director of Manufacturers Trust Company, New York City.

Among many of the other companies of which Stauffen was a director are Union Oil Co. of California and Redisco Corp., a finance subsidiary of Nash-Kelvinator. He was chairman of the Board of Trustees of the Austen Riggs Foundation which maintains a psychiatric hospital and clinic.

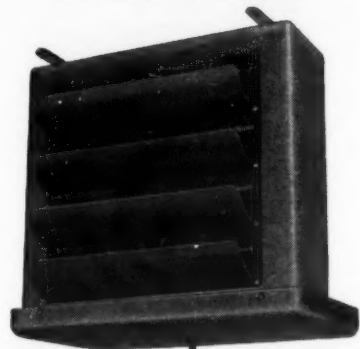
## Terzia Hardware Stages Big Opening for New Store

BASTROP, La.—Terzia Lumber & Hardware Co., which carries Admiral refrigerators and other merchandise, held grand opening of its new store located at 413 E. Madison St., here recently.

Fensky C. Terzia is manager; Fensky C. Terzia, Sr., president; Leo F. Terzia, vice president; and Leo F. Terzia, Jr., secretary-treasurer.

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## Belmont, N.C. Cooling Contract Is Awarded to Ross & Witmer

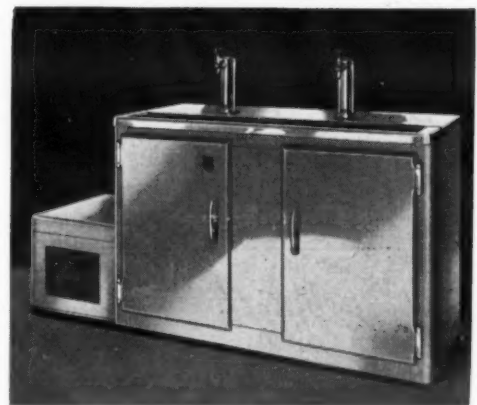
BELMONT, N. C. — The firm of Ross & Witmer, of Charlotte, has been awarded the contract for air conditioning the new office building of Henry Lineberger, Wilkinson Boulevard, which will cost about \$150,000.

Construction is to begin at once and will be completed in about six months. The new structure will be used as office headquarters for the Knit Products Corp., of Belmont, manufacturers of Vision full-fashioned hosiery, the Belmont Throwing Co., in addition to the Outlook Mfg. Co.

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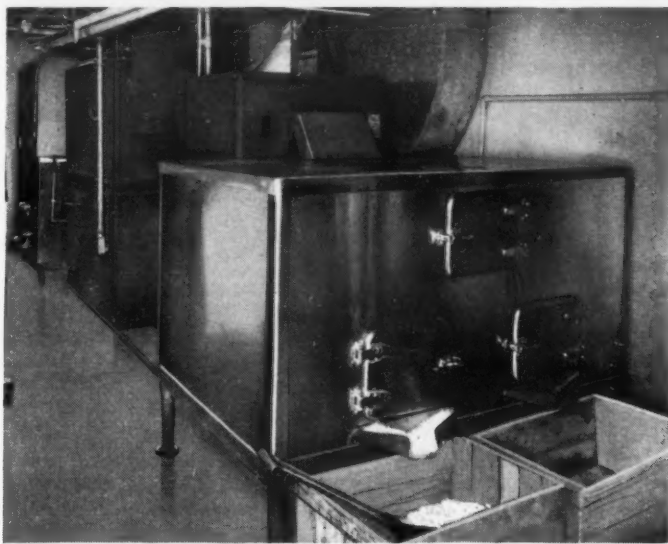
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COMPLETE INSTALLATION of York equipment at the "King of the Sea" restaurant includes a Flake machine (foreground), Yorkaire conditioner (center), and automatic ice maker (rear).

## Ice Makers, Cooling Units Aid Restaurant

NEW YORK CITY—The "King of the Sea" seafood restaurant on Third Ave at 53rd St. here is completely York equipped, York Distributors, Inc., reported recently.

Adolph Flashner, proprietor of the restaurant had two BW550 Yorkaire's, one 366W 30-hp. condensing unit, and one BW 1001 Yorkaire installed to cool the entire restaurant. A cooling tower was added later to conserve water.

The restaurant also boasts two DER-10 Flake machines and a York 450 automatic ice maker.

## Huggins Named To Product Planning Post with G-E Air Conditioning Dept.

BLOOMFIELD, N. J.—Appointment of L. Gale Huggins as product planner for central plant air conditioners and large refrigeration machines at the General Electric Air Conditioning Department headquarters here, has been announced by G. K. Iwashita, manager of product planning.



L. G. Huggins

Huggins comes to General Electric from the position of vice president and general manager of the Horix Mfg. Co. of Pittsburgh. He is a graduate of the University of Arkansas with degrees of B.S.E.E. and E.E.

Upon graduation he joined Westinghouse Electric Corp., in the power Apparatus Department and spent 10 years as central station engineer working with electric utilities as a consultant on power plants and systems.

When the company entered the air conditioning field in 1933, Huggins was given a position in the newly-organized department with the responsibility of guiding the development of the new equipment to meet market needs, developing and training company personnel and distributor organizations, supervising the preparation and publication of technical data, and general headquarters administration, according to the company.

Huggins was active in the early development of room air conditioners, self-contained air conditioners, and equipment for fully automatic unattended air conditioning plants and systems. His patent on room air conditioners covers the arrangement of window sill mounted units now used by most manufacturers of this equipment. Other patents which have been issued to him are related to a wide variety of air conditioning equipment.

He served Westinghouse successively in the capacities of commercial engineer, product engineer, assistant manager air conditioning department, assistant manager air conditioning division, manager air conditioning and refrigeration department, and manager contractor apparatus department.

During the war, Huggins served as a civilian instructor to train officers as instructors in tank gunnery and the care and use of the tank gun stabilizer. In addition, he served as a liaison between the Armed Force and the design engineering and manufacturing organizations which were at that time responsible for the development of the gyro-stabilizer.

## Carrier Air Conditioning Installations Planned for Venezuela Hotel, Hospital

NEW YORK CITY—Venezuela's newest and most modern hotel, the \$2,000,000 del Lago now under construction at Maracaibo, is to be air conditioned by equipment supplied by Carrier Corp.

Two new reciprocating refrigeration machines, with a combined refrigeration capacity of 190 tons, will supply chilled water to individually-controlled fan coil units in the 140 guest rooms. Additionally, Carrier is supplying four Weathermakers for public spaces and five for stores on the main floor.

The air conditioning system was designed by the architects, Holabird & Root and Burgee. Carrier's representatives in Venezuela, C. A. Zuliana de Materiales and S.A.V.E.R. Guinand, are handling the installation.

Another important installation in Venezuela is that supplied by Carrier for the recently-completed Hospital Jose Maria Vargas in La Guaira. Three separate systems are used to air condition rooms, wards, and delivery rooms. S.A.V.E.R. Guinand designed and installed the systems.

## \$50,000 Securities Sale OK'd

GRAND RAPIDS, Mich.—Peter B. Vander Meer and Adolph G. Lipman, partners in the new Grand Rapids Refrigeration Co., have been authorized to sell \$50,000 in securities of which \$10,000 has been paid in. A new addition costing \$20,000 at 2033 Alpine Ave., N. W., is planned.

## 'Display Window', 'Will Call' Dept. Show How Markets Can Be Sold More Refrigeration

SAN FRANCISCO—Sales of fine cut meats have risen sharply with the installation of two impressive stainless steel "display windows" which flank the entrance to Dietz Meat Co. on Market St. here.

Custom-built for the food firm, the two big refrigerated units are 16 ft. long, 3½ ft. high, and 20 in. deep, completely enclosed in double Thermopane glass, with a 10-in. stainless steel framework at top and bottom.

Each case is so arranged that it may be filled from the front or back as desired, an important timesaver in view of heavy traffic through the store during the rush periods, and is lighted with brilliant "daylight" cold cathode lighting.

Out on the sidewalk, where some of the heaviest traffic in the Golden Gate City passes, the two cases display a "gallery of fine meats" until 4:30 each afternoon, when the meats are taken inside and sold from interior display cases.

Stainless steel trays, sloping at a gentle angle, show steaks, chops, roasts, cured meats, ground beef, lamb, pork, and game meats, all deluxe cuts on the right side, and fine turkey, duck, poultry, and sea foods on the left.

Such luxury meats as filet mignon at \$1.79 per pound and fillets of pompano at an equal price have proven excellent "crowd stoppers" according to Sam Dietz, owner, who cooperated with Cyclops Refrigeration Co. in designing and installing the cases. All of the meats shown are carefully cut for display by expert butchers, displayed with green

leaf garnishes, plus color photos of broiled steaks, and roasted cuts.

The two cases, with cold-plates installed under the stainless window flooring, are kept at 35°, exactly controlled, with refrigeration furnished by a 1½-hp. condensing unit in the basement directly below. An automatic defrosting system, plus the double Thermopane glass, keeps the windows clear under all weather conditions, for maximum eye appeal of the meats.

In addition to the windows, Cyclops Refrigeration supplied more than 120 ft. of stainless refrigerated display cases on either side of the store, which closely resemble the window units.

Each consists of a stainless steel counter, with concealed cold plates, with a slanting-back plate glass front 3 ft. high. The plate glass continues back level with the counter top, to form a "blanket of cold" averaging less than 40°.

Another 20 ft. of the same type of case is installed on the second floor "will call" balcony, where customers may order special cuts by telephone, coming in to pick them up later.

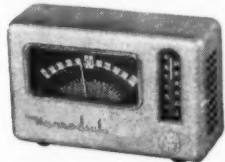
## First African Frigidaire

PORT ELIZABETH, South Africa—The first Frigidaire to be made in South Africa recently came off the production line at General Motor's electrical household equipment plant here. Imposition of import controls speeded up GM's plans for the manufacture of refrigerators in the Union.

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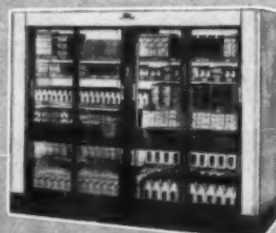
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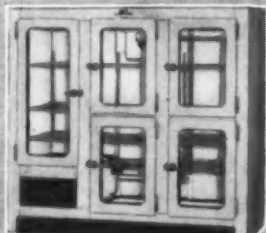
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## BACK TO FUNDAMENTALS

Refrigeration Principles for  
Beginners & Experienced Engineers, Salesmen, and Dealers

By K. M. Newcum, Author of  
THE MASTER SERVICE MANUALS

### Theory of Refrigeration-5

#### LATENT HEAT

Latent heat is the heat required to change a solid to a liquid or a liquid to a vapor without changing the temperature of the substance.

The word "latent" means "concealed," "invisible," or "hidden." The hidden heat required to change a solid to a liquid or a liquid to a vapor is called "latent" because the

temperature does not change in the process.

It is known that if sufficient heat is applied to many solid substances, each will eventually melt into a liquid. Iron will melt, for example, if heated sufficiently. In so doing it changes its physical state. Its molecules become more widely separated, and their motion is increased by the heat the substance has absorbed.

To go a step further, if the liquid formed by adding heat to a solid is heated further, a point will be

reached where the liquid will become a gas. The heat, by then, has so increased the motion of the molecules that they have separated a greater distance from each other.

It is also known that even though a large quantity of latent heat is absorbed in changing a solid to a liquid or a liquid to a gas, this change in physical state is not accompanied by an increase in temperature.

The large quantity of heat absorbed by a substance in changing its physical state from a solid to a liquid is *latent* (concealed, invisible, or hidden) in the substance. Ice water (liquid) at 32° feels no warmer than 32° ice (solid). And the thermometer reads the same for both. Yet it takes a large quantity of latent heat to change ice to water.

This process of changing a solid to a liquid is known as *fusion* (melting). Thus, the latent heat absorbed in this process is properly called the *latent heat of fusion*.

#### Sensible Heat and Latent Heat of Fusion

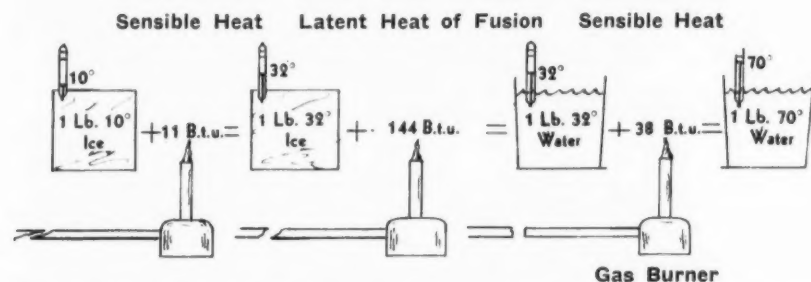


Fig. 10—A relatively small quantity of sensible heat is required to raise the temperature of a solid, but a large quantity of latent heat is required to change a solid to a liquid. It requires only 11 B.t.u. (sensible heat) to raise the temperature of a pound of ice from 10° to 32° but it requires 144 B.t.u. (latent heat of fusion) to change the 32° ice to 32° water. Then it requires only 38 B.t.u. (sensible heat) to warm the water from 32° to 70°.

#### Sensible Heat and Latent Heat of Evaporation

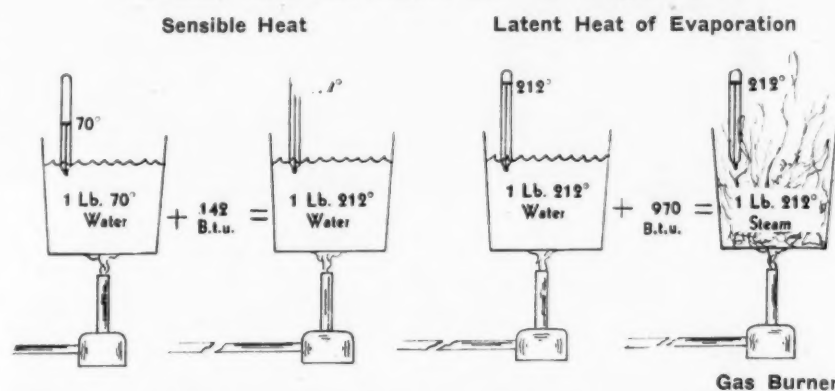


Fig. 11—A relatively small quantity of sensible heat is required to raise the temperature of a liquid, but a large quantity of latent heat is required to change a liquid to a vapor. Only 142 B.t.u. (sensible heat) will raise the temperature of a pound of water from 70° to 212° but it requires 970 B.t.u. (latent heat of evaporation) to change the pound of 212° water to 212° steam.

#### LATENT HEAT OF FUSION EXAMPLE 1

In this example a 1-lb. piece of ice is heated from 10° to 32°; melted to 32° water, and then allowed to warm up to the temperature of a 70° room.

Following this process step by step will reveal the relatively small quantity of *sensible* heat required to raise the temperature of a substance several degrees, as compared to the large quantity of *latent* heat necessary to change the physical state of the same substance.

A. In changing from 10° to 32°, the ice must warm up 22°.

B. To determine the number of B.t.u. absorbed in the 22° temperature rise, multiply the weight of the ice (1 lb.) by its specific heat (.500 roughly—.502 actually) and by the number of degrees rise in temperature (22°).

$$1 \times .500 \times 22 = 11 \text{ B.t.u.}$$

This quantity is sensible heat because it can be measured on the thermometer.

C. In changing the physical state of the 1 lb. of 32° ice to 1 lb. of 32° water, we know that 144 B.t.u. will have to be absorbed, as this is the latent heat of fusion of 1 lb. of ice. More than 13 times as much heat was required to melt the ice as was required to raise its temperature from 10° to 32°. Despite all this large quantity of latent heat absorbed by the ice the temperature was not increased.

D. In figuring B.t.u. absorbed in increasing the temperature of the 32° water to 70°, subtract 32 from 70. This equals 38°. We know the specific heat of water is 1.00, so it takes 38 B.t.u. to raise the temperature of 70°. 1 (lb.)  $\times$  1:00 (specific heat)  $\times$  38 (degrees rise in temperature) = 38 (B.t.u.).

E. Summarizing this example, total number of B.t.u. required to change the temperature of 1 lb. of 10° ice to 32°, to change its physical state to 32° water, then increase the temperature of the water to 70° is:

$$11 + 144 + 38 = 193 \text{ B.t.u.}$$

#### LATENT HEAT OF FUSION EXAMPLE 2

A further example may be studied using 25 lbs. of ice at a temperature of 5°, to finally result in 25 lbs. of water at 60°.

A. In figuring the increase in temperature of 25 lbs. of 5° ice to 32° (its melting point) we find 32 minus 5 = 27 which is the number of degrees rise in temperature. There are 25 lbs., hence multiply 25 (number of lbs.)  $\times$  27 (number of degrees). This equals 675. Then multiply 675 by .5 (specific heat of 1 lb. of ice) which equals 337.5 B.t.u., the quantity of heat necessary to increase the temperature (sensible heat) of 25 lbs. of 5° ice to 32° ice.

B. In figuring the change in physical state of 25 lbs. of 32° ice to 25

lbs. of 32° water, multiply 25 (number of lbs.) by 144 B.t.u. (latent heat of fusion of 1 lb. of ice). This equals 3,600 B.t.u.

C. To figure increase in temperature of 25 lbs. of 32° water to 60°, subtract 32 from 60. This equals 28, or the number of degrees increase in sensible heat. Then multiply 25 (number of lbs.) by 28 (number of degrees increase in temperature). This equals 700. Then multiply 700 by 1.00 (specific heat of water) to arrive at a total of 700 B.t.u. necessary to raise the temperature of 25 lbs. of 32° water to 60°.

D. The total amount of heat absorbed in the entire process would be as follows:

337.5 B.t.u. Step A  
3,600.0 B.t.u. Step B  
700.0 B.t.u. Step C

4,637.5 TOTAL B.t.u.

(To Be Continued)

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"FREON-22"	"FREON-113"
"Boiling Point"	"Boiling Point"
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# Radiant Energy In 'Freeze Drying'

It Offers More Rapid Drying Than Conduction Heating,  
University Experimenters Discover

MADISON, Wis.—"Freeze drying" is an important new development in the science of manufacturing drugs and biologicals that offers new possibilities for low temperature refrigeration, as was graphically pointed out recently by AIR CONDITIONING & REFRIGERATION NEWS.

A complete description of the freeze-drying cabinet being produced by Refrigeration Systems, Inc., of Chicago appeared in the Oct. 30 issue of the NEWS.

Refrigeration plays an indispensable role in this process, but one of the important new developments is the employment of radiant energy along with low temperature and high vacuum to achieve the desired drying effect.

Whether to use radiant energy or heat by conduction was a major problem in the development, according to W. H. Zamzow and W. R. Marshall, Jr., of the Chemical Engineering Department of the University of Wisconsin. In describing research along these lines, the two chemists report several findings that have interesting implications.

## CONCLUSIONS DRAWN FROM PRELIMINARY EXPERIMENTS

"On the basis of preliminary investigation of radiant freeze drying," they state, "the following conclusions have been drawn:

"1. Freeze drying with radiant energy is more rapid than with conduction heating because of the penetration of radiation into the sample. Thus, the freeze drying capacity for an organic dye was increased by 74% by virtue of the penetrating effect of radiant energy.

"2. Drying rates are higher with higher percentage moisture contents, but the production capacity of dry product is not increased.

"3. Increasing the sample thickness decreases the drying capacity for materials with solid contents of 30%.

"4. Qualitative tests indicated that radiant energy definitely penetrated the frozen solid during drying."

Commercial applications have shown "striking reductions" of drying time for a number of biological products through use of radiant

freeze drying, they also report.

Freeze drying by conduction heating of blood fractions took 84 hours; with radiant freeze drying, only 12 hours; blood plasma, 48 hours with conduction, 14 hours with the radiant method; albumin, 48 hours with conduction, 3 hours with radiant energy.

Zamzow and Marshall also point out that "in some of the above cases reduction in drying time may have been responsible for a higher level potency which was unobtainable by conduction freeze drying."

## DISTINCTION BETWEEN METHODS

Outlining the distinction between freeze drying and conventional drying, they explain:

"In the drying of a wet solid that is not frozen, the water is removed by evaporation from a liquid surface. As the drying progresses, the material may shrink and form hard, impervious agglomerates. Likewise, there is generally a movement of liquid water within the solid during drying.

"In the case of freeze drying, water in the form of ice is removed by sublimation, which is direct vaporization of ice to water vapor without passage through the liquid state. Since the material is not fluid at these low temperatures, the dry solid tends to retain its original shape and generally occupies the same volume when dry as it did when wet.

"Further, since the ice is relatively immobile, freeze drying is usually accompanied by a retreating ice layer into the solid, and away from the exposed surface.

"In the drying of wet solids that are not frozen, the rate of drying is very often constant during the initial part of the drying cycle. In this case the water is transported to the surface as rapidly as evaporation can remove it, and the rate of drying is controlled by the rate of vapor diffusion through a gas film adjacent to the solid.

"However, at some critical moisture content, the water can no longer flow to the surface as fast as it is removed. At this moisture content,

the zone of evaporation starts to recede into the solid, and the rate of evaporation starts to decrease. This phase is usually termed the first falling-rate period of drying. A second falling-rate period occurs when moisture held by the solid at reduced vapor pressure begins to evaporate.

"In the drying of frozen materials the ice at the surface exposed to the vacuum sublimates first. Since the ice is not free to move, the zone of sublimation or drying immediately starts to recede. However, since the solid usually retains its original structure of shape there is a large percentage of voids through which vapor can diffuse. Thus, the drying rate remains substantially constant until near the end of the drying cycle when bound moisture is sublimed. However, even in freeze drying, this terminal drying period is of considerable significance and usually represents a controlling factor in determining the over-all drying time."

## THERMAL RESISTANCE IS IMPORTANT

As for conduction freeze drying, Zamzow and Marshall point out that "the thermal resistance at the interface between the frozen solid and the retaining medium is a major factor in determining the rate of heat input and hence the rate of freeze drying."

What usually happens in practice where the material to be dried is sprayed and frozen on a belt in a vacuum, they explain, is that the frozen solid to be dried is not 100% in contact with the retaining medium. This means that the heat is transferred in two ways; by solid conduction at the points of contact, and by vapor conduction and low temperature radiation where actual contact does not occur. The latter offers much more resistance to heat transfer.

This problem is not present when drying by means of infrared radiant energy is employed, although radiant drying does involve other problems, it was stated.

There is, for example, the matter of employing the optimum wavelength of infrared for this process. Also, it was early discovered that glass containers for holding the material to be dried absorbed a high percentage of the radiant energy, while certain plastics had superior transmission characteristics.

## 'Jack the Genius'... Solver of Service Problems'



## Marcus Furniture Co. Will Install Air Conditioning

FRANKFORT, Ky.—Installation of air conditioning equipment will be one of the features of a remodeling program announced by the Marcus Furniture Co., occupying a six-story structure here.

The program, expected to be completed by spring, will cost between \$75,000 and \$100,000, it is understood from a company spokesman.

**M&E**  
EST. 1866

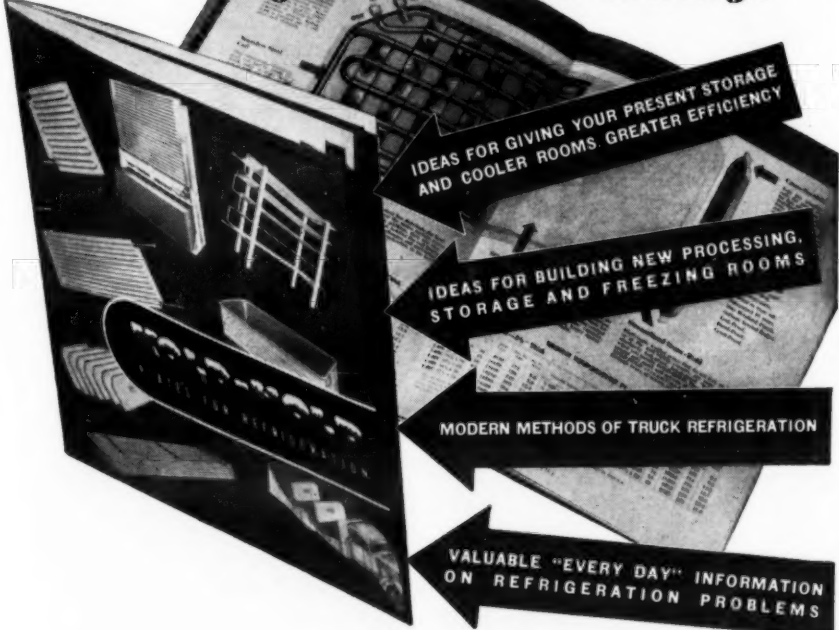
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## Seattle Wholesaler's Move Means Lots of Parking Space

SEATTLE—Refrigerating & Power Specialties Co., refrigeration parts wholesaler here, has announced that it is now located at 353 Harrison St. New telephone number is ALder 4875. The new location provides plenty of free parking space, the wholesaler said.



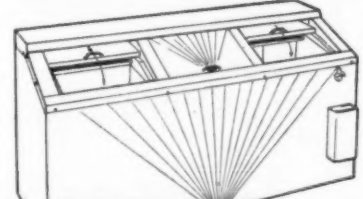
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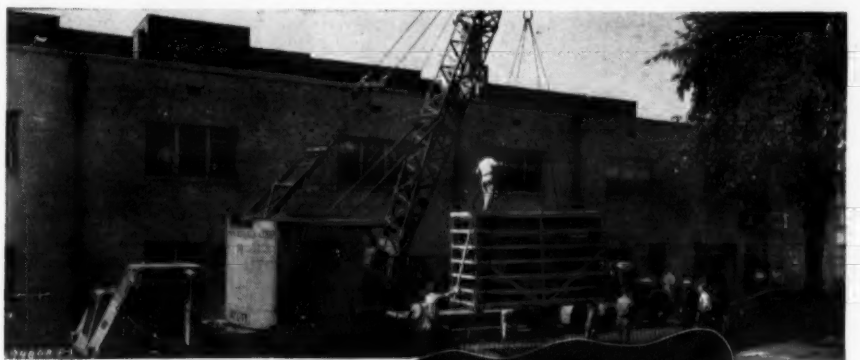
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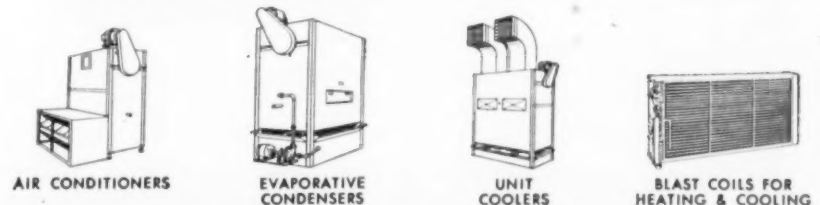
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# Refrigeration Problems

## and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

### Questions And Answers

Following are two of the questions that readers have sent in the past few weeks:

#### HOW TO FIGURE MOTOR OVERLOAD

**QUESTION:** I have several machines in an institution that employs a full-time maintenance man whose work is mostly electrical. He replaces fluorescent lamps, ordinary incandescent lamps and fuses, makes minor repairs, and keeps motors oiled and cleaned up. He claims that most of the motors on the refrigerating machines that I have installed there are badly overloaded, and he has the superintendent on my neck.

There is one in particular that they insist needs a bigger motor. At present it is not giving them any trouble, doesn't blow fuses, and the head pressures are about right. So I don't see any sense in changing it. But I want something to show them that

will prove to them that the motor is okay.

It is a 1-hp. machine hooked up to 230 volts, and operates an eight by 10 walk-in with a blower coil. Suction pressure runs about 23 lbs. on an average, with a head pressure from about 100 to 175 lbs., depending on how warm the room is.

The nameplate on the motor shows 13 amperes at 115 volts, 6.5 amperes at 230 volts, full load. When the institution's maintenance man checked it and his ammeter showed 8.5 amperes, he claimed that the unit is overloaded about one third, and that I ought to put on a 1.5-hp. motor instead.

I got a wattmeter and checked the unit. The reading showed 1,250 watts. As I understand it, watts are equal to the volts times the amperes, so I told him that there must be something wrong with his ammeter, for 1,250 watts divided by 230 volts give about 5.5 amperes, which is less than the 6.5 amperes shown on the nameplate as full load. On the other hand, 1-hp. is supposed to equal 746 watts. So according to that, the motor is overloaded at 1,250 watts.

Will you please straighten us out on this?

**ANSWER:** You are both right and you are both wrong. The motor is overloaded about 31% and his ammeter is probably accurate, for the current should be about 8.5 amperes under fairly heavy load conditions. The motors on air-cooled refrigerating machines are designed to carry 40% overload indefinitely, so there is nothing for him to get excited about.

Putting it another way, the motor nameplate says that it is a 1-hp. motor, but you could call it a 1.4-hp. motor—if you wanted to put it on a full load basis. So in reality, this motor is only loaded up to about 93.5% of what it could safely carry indefinitely. Tell the maintenance man not to worry. The manufacturer of the refrigerating machine knew what he was doing when he put that motor on.

You, however, are a little mixed up about watts. They are not equal to volts times amperes in an a.c. motor, only in a d.c. motor. You obtain wattage by multiplying the volts by the amperes. In an a.c. motor you multiply the volts by the

amperes, but you must then multiply by what is known as the "power factor." The power factor is the percentage of the amperes that are really effective in producing power and that therefore show up (along with the volts) in watts on the wattmeter.

In your case, 230 volts multiplied by 8.5 amperes equals 1,955, which you can call volt-amperes. To convert this volt-ampere figure into watts, you would have to multiply it by about 63.9% to get your wattmeter reading of 1,250 watts. So the power factor in that case is 63.9%. This is about what you would expect for such a motor. Small single-phase motors have power factors of about 45% to 70%, depending upon how much they are loaded.

To be more accurate, a motor does not in itself have a power factor, but it has certain characteristics that cause a power factor of the electric current. So it is customary to refer to the power factor of the motor.

Now as to the 746 watts against the 1,250 watts. In the first place, we found that the motor was overloaded 31%, so 746 would have to be multiplied by 1.31 to get the watts for a 1.31-hp. motor instead of a 1-hp. motor. This will give us 977 watts instead of 746 watts.

It is true that 746 watts represent 1-hp., but only if the motor were 100% efficient. No machine is 100% efficient; some of the energy put into the machine is lost and does not go into producing power. An electric motor has relatively high efficiency as compared with gasoline engines, steam engines and some other forms of machines, which may attain only 15% efficiency, or even less.

If your 1.31-hp. motor were 100% efficient, it would draw 977 watts. It actually draws 1,250 watts so it is 977 ÷ 1,250 or 74.5% efficient, which is about in line with what might be expected of that size motor.

The main issues in this whole affair are that your customer understands that his installation is quite normal, that his motor is the right size for that job, and that he can actually disregard the horsepower rating on the nameplate. It is a rather odd and somewhat complicated situation that has developed over a period of years, but certainly nothing for your customer, his maintenance man, or you to worry about.

### WHAT ARE 'GAUGE' AND 'CIRCULAR MILS' IN WIRING?

**QUESTION:** My electrician talks about different sizes of wire in "gauge" and in "circular mils." Will you please explain these terms to me?

**ANSWER:** You are no doubt referring to copper wire used for electrical work. The term "gauge" refers to a number that it given to comparatively small wires, up to about 1½-in. in diameter, and is known as the "B and S" gauge.

Most wiring for electric lights is done with No. 14 gauge wire, which consists of one solid copper wire .0641 in. in diameter. No. 12, which is used for wiring to ¾-hp. (115 volt) or 2-hp. (230-volt) motors is .0808 in. in diameter. The next size is No. 8 which is .1285 in. in diameter; and so on. The larger the wire, the smaller the number. Finally at size 0000, whose diameter corresponds to .528 in., it became cumbersome to use more zeros, so in the sizes above 0000 the wires are referred to in "circular mils."

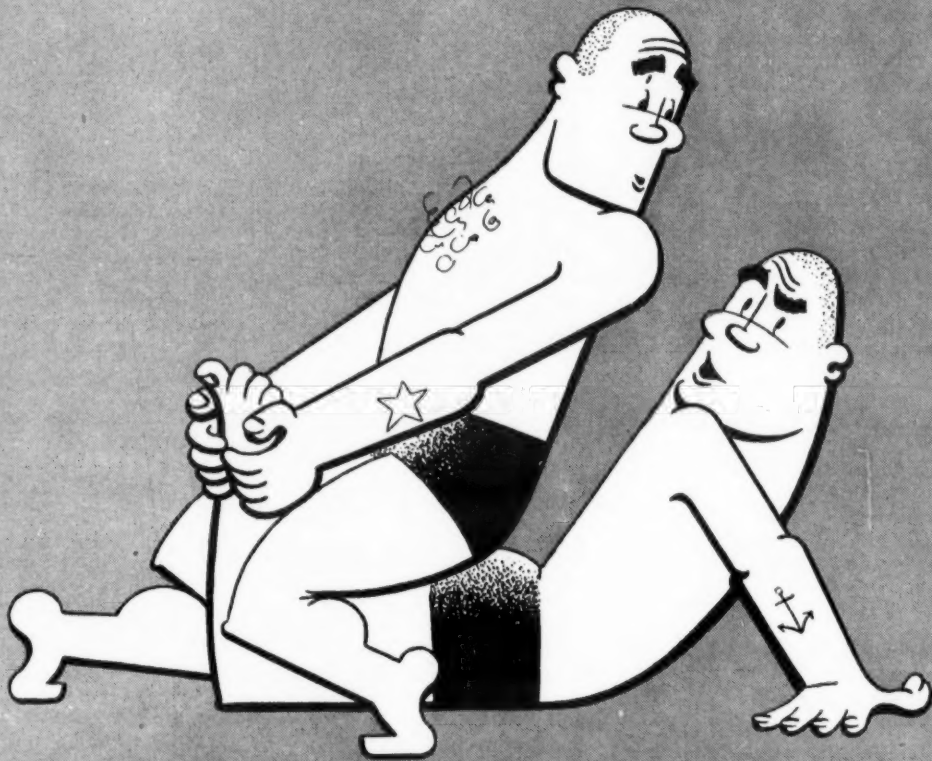
A circular mil is the cross-sectional area of a wire that is one thousandth of an inch in diameter. The actual cross-sectional area is .0007854 sq. in., but the name "circular mil" is used for this cross-sectional area.

The next size above 0000 is 250,000 circular mils, which has a cross-section equal to a solid wire having a diameter of .575 in. The next size is 300,000 circular mils, which has a cross-sectional area equal to a solid wire of .630-in. diameter.

At about No. 8 size (1.285 in. in diameter) the wire begins to get too stiff to bend very easily and to pull through conduit, so from there up the wires are stranded. No. 6 is composed of seven small wires whose combined cross-sectional area is equal to what the solid wire would be if it had a diameter of .184 in. In the larger sizes, the number of strands increase; up to 0000 there are 19 strands and there are 37 strands in 250,000 and 300,000 circular mil wires.

#### Jet Appliance In New Store

NEW ORLEANS—Crosley refrigerators and other merchandise will be handled by the new and larger Jet Appliance Co., Inc., store at 1724-26 Tulane Ave., here.



## IT'S MUCH EASIER BENDING

# DRYSEAL

REFRIGERATION TUBE

● There's no need to pull and haul when you work with dead-soft Dryseal. It is bent with the hands with little effort. It is this soft temper and its ductility that make it easy to flare for compression fittings without splitting.

Another very important feature of Dryseal is the double-crimp seal at each end of the tube. This is done in the manufacturing and keeps dirt and

moisture from entering the tube. The seal is made in such a way as not to change the diameter of the tube so that it can pass through any opening large enough for the tube itself.

And, for your greater convenience we have just recently brought out Dryseal in a nifty-50 one-coil carton. This carton, which has been attractively designed for easy identification in stock, contains one 50-foot coil of Dryseal... is easier to handle, light weight, economical.

## REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

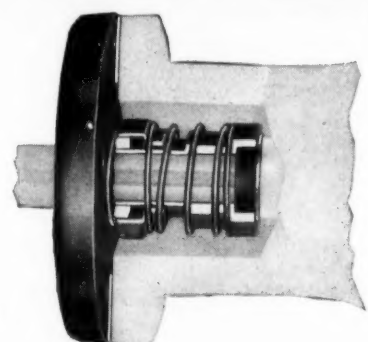
230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y. Sales Offices in Principal Cities, Distributors Everywhere.

## ROTARY SEAL REPLACEMENT UNITS

MORE THAN 900 MODELS

UNIT NO. 4215



For most makes and sizes of Commercial, Semi-Commercial, Air Conditioning, and Household Refrigerator Compressors. ROTARY SEAL Units are known throughout the world for... *Simplicity in Construction... Ease of Installation... Efficiency of Operation... Economy.* The original time-tested, precision-built replacements—19 years of service.

AT ALL LEADING JOBBERS



"Seal with

Certainty!"

2020 NORTH LARRABEE STREET  
CHICAGO 14, ILLINOIS, U.S.A.  
CANADIAN AGENT: 2025 ADDINGTON AVENUE  
MONTREAL 28, QUEBEC, CANADA

NOW in the NIFTY-50 one-coil carton!



# Government Contracts

## PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing office under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid set is made.

### DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Rock Island Arsenal; Springfield Arsenal; Watervliet Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

Description	Quantity	Dollar Value	Contractor and Address
Officer in Charge, Navy Purchasing Office, Washington, D. C.			
Water Refrigeration Unit	6	4250	21 Dec 50
Temperature Control Unit & Sink			
Chicago Quartermaster Depot, QM Purchasing Division, Chicago, Illinois			
Boiler-Toaster And Griddle			
Combination-31 1/2 x 22 1/2"			
To Be 40% High			
Gas-Manufactured	25 ea	1244	22 Dec 50
Gas-Natural	20 ea	1244	22 Dec 50
Commanding Officer, Naval Supply Depot, Mechanicsburg, Penn., Attn: Code 778B			
Gages-Compound-Pressure-Retard Compound-Liquid Level-Test	2505 ea	764539	19 Dec 50
Pressure-Various Navy And Commercial Specs Apply			
Yards And Docks Supply Office, Porthuene, California, Attn: Procurement Division			
Heater-Elec-Water-30 Gal	25 ea	20083	19 Dec 50
C. O., Armed Services Medical Procurement Agency, Brooklyn, N. Y.			
Psychrometer Sling	12 ea	701	18 Dec 50
Supply Officer, Naval Proving Ground, Dahlgren, Virginia			
Air Conditioners, Model RH-10-4	3 ea	1-29	29 Dec 50
Yards And Docks Supply Office, Porthuene, California, Attn: Procurement Division			
Refrigerators-6 Cu Ft	10 ea	19921	18 Dec 50
Commanding Officer, U. S. Naval Air Station, Corpus Christi, Texas			
Refrigerator Approx 10 Cu Ft	1 ea	216-51-51	18 Dec 50
Refrigerator Approx 8 Cu Ft	7 ea	216-51-51	18 Dec 50
Deep Freeze	1 ea	216-51-51	18 Dec 50
Gas Range Household Type	10 ea	216-51-51	18 Dec 50
Navy Purchasing Office, 111 East 16th Street, New York City			
Combined Hot Water And Storage Heater Service	4 ea	7840	26 Dec 50
Machine-Dishwashing	2 ea	7842	26 Dec 50
Officer in Charge, Navy Purchasing Office, Los Angeles, Calif.			
Fan Propeller Type	45 ea	42760	18 Dec 50
Relief Valves	1 ea	42469	20 Dec 50
Flow Control Valve	1 ea	42469	20 Dec 50

Aviation Supply Office, 700 Robbins Avenue, Phila., Pa.  
Toasters Bread Electric 16 ea H52904 22 Dec 50  
To Be Equal To Savory Model CT 4

### GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.			
Parts For Westinghouse Air Conditioners, 21 Items		578	12-15-50
Air Conditioner, 35000 BTU/HR	1 ea	580	12-15-50
Air Filters	946 ea	592	12-11-50
Chief, Administrative Services Section, Public Buildings Service, General Services Administration, 902 U. S. Custom House And Appraisers Stores, Philadelphia 6, Pennsylvania			
Absorption Cannisters	60 ea	1309	12-12-50
Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.			
Steel Tubes For Water Cooler	420 ea	619	12-15-50
13 Ga, 1 1/2" By 18"			
Chief, Purchase Branch, Federal Supply Service, General Services Administration, Room 7120, 7th and D Sts., S. W. Washington 25, D. C.			
Refrigerator, Gas, Household	2 ea	SF-94991-R	12-20-50
Refrigerator, Elec., Household	109 ea	SF-94991-R	12-20-50
Refrigerator, Elec., Commercial	3 ea	SF-94991-R	12-20-50
Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.			
Repair Parts For Frick 4 x 4 Ammonia Compressor	Misc	624	12-14-50

### U. S. DEPARTMENT OF COMMERCE

Description	Quantity	Reference No.	App. Bid Date
Chief, Procurement Section, National Bureau Of Standards, 620-11th St., N. W., Washington 25, D. C.			
Air Conditioning Unit	1 ea	B-1-1097-51	12-15-50
Chief, Procurement Branch, Civil Aeronautics Administration, 1200 Exchange Building, Seattle 14, Washington			
Install An Air Conditioning System At The CAA-S Radar Equipment Room In The Administration Building Of The Seattle-Tacoma Airport, Seattle, Washington	1 job	7-51-5083-1	12-11-50
Chief, Procurement Section, National Bureau Of Standards, 620-11th St., N. W., Washington 25, D. C.			
Gauge Pressure	13 ea	B-2-1133-51	12-11-50
Gauges Refrigeration Pressure	6 ea	B-2-1133-51	12-11-50

### VETERANS ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Chief, Procurement Division, Supply Service, Veterans Administration, Washington 25, D. C.			
Automatic Clothes Washing Machine	31 ea	M-161	12-20-50
Clothes Drying Machine	31 ea	M-161	12-20-50

### CONTRACTS AWARDED AS OF NOV. 29, 1950

Description	Quantity	Dollar Value	Contractor and Address
Chicago Quartermaster Depot, U. S. Army, 1819 West Pershing Rd., Chicago 9, Illinois			
Refrigerators Prefab, Sectional 10 x 12	50	70,550.00	Bally Case & Cooler Co. Bally, Pa.

## Installing Combination Dishwasher, Sink Will Require 25% Down, 15 Mos.

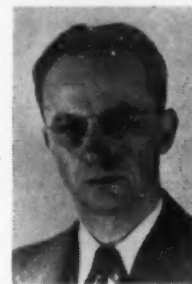
WASHINGTON, D. C.—A 25% down payment with 15 months to pay the balance is required by Regulation W on combination sinks and dishwashers, the Federal Reserve Board announced recently.

The board in its interpretation said that even though instalment financing of a combination kitchen sink and dishwashers may be covered by FHA Title 1 insurance as a home improvement, it is still not eligible for the 10% down and 30 months to pay provision for home improvements in Reg. W.

The board declared that Reg. W states that combinations of units that include the following listed household appliances are subject to the same credit restrictions as apply to those appliances by themselves.

These appliances are mechanical dishwashers, cooking stoves and ranges, ironers, refrigerators, freezers, washing machines, and clothes driers.

The board noted that where a credit insured under Title 1 arises from the installation in an existing residential structure of such a combination unit, the part of the credit applicable to the combination unit must be on the basis of 25% down and 15 months to pay, though the remainder of it could be financed at 10% down and 30 months to pay. Such a case would be considered as two separate credits, the board explained.



L. O. BOWER



J. S. TWIST

## Sherer Appointments --

(Concluded from Page 1, Column 4) to the Fifth Infantry Division. He spent three and a half years overseas out of a total of four and a half years in service, being released from active duty with the Army rank of major.

Following factory training, Twist spent two years selling in the field and then joined the company's home office sales department. He became assistant sales manager in 1949, the company stated.

## Gibson Prices Up 5%

(Concluded from Page 1, Column 2) E, \$329.95; model G, \$384.95; and model H, \$439.95.

New freezer prices are: model HF-1000, \$384.95; and model HF-1890, \$614.95.

In the new price line-up arrangement, Gibson distributor discounts are to remain unchanged, the company announcement said.



## NEW 1951 Self Service FROZEN FOOD DISPLAY CABINETS

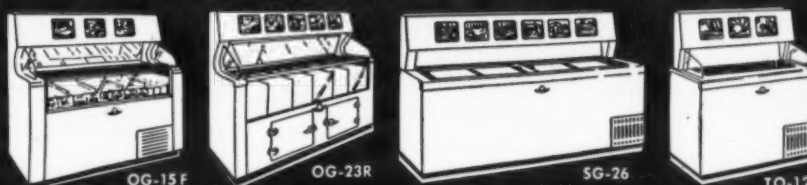


Model SG-20. Capacity 870 standard frozen food packages. Life-time construction of heavy gauge steel. High gloss, gleaming white finish. Full-color, three-dimensional photographs.



Sales-conscious business men catering to the public can't deny that beauty attracts. That is why ACE is their choice when they want to enjoy maximum frozen food sales. ACE cabinets are beautiful as well as super-efficient . . . and built to give years of trouble-free service. Frozen foods move at a terrific pace . . . if they are merchandised in an ACE! Literature on request.

### THE BUSIEST PLACE IS AROUND AN ACE!!



ACE CABINET CORP.

Executive Sales Offices: 110 East 42nd Street, New York 17, N. Y.

Export Dept.: 39 Broadway, New York 6, N. Y.

Manufacturers of Ice Cream Dispensing Cabinets, Home and Farm Freezers, Frozen Food Display Cabinets and Barrels.

EASIER TO READ! COMPLETELY REVAMPED WITH NEW TYPE FACES

WHOLESALE ONLY

Here's Your New Edition of **HARRY ALTER'S DEPENDABOOK No. 153**

Illustrates, Describes and Prices\* OVER 9,000 **REFRIGERATION PARTS and Supplies**

\* some items up to 60% below regular prices

Write on your letterhead to **The HARRY ALTER Co.**

1728 South Michigan Avenue Chicago 16, Ill. 134 Lafayette Street New York 13, N. Y.

## Refrigeration Units WANTED

Desire to purchase 1/3 to 1-HP Sealed or open type; standard brands; Complete condensing units; Also parts; Give full details.

**HARWOODE EXPORT CO.**  
31 E. 4 Street, New York 3, N. Y.

## sign of satisfaction

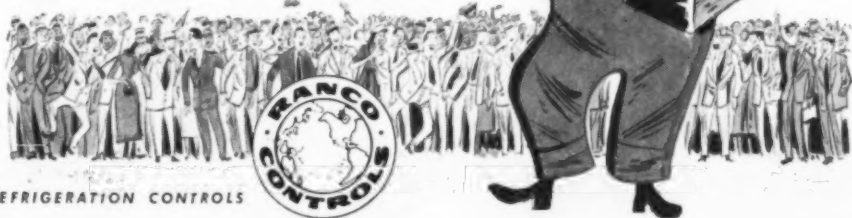
More than 30,000,000 Ranco Controls now in use

Refrigeration servicemen the world over will tell you that to install a Ranco Replacement Control means greater customer satisfaction. For thirty million Ranco controls are now in use, evidence extraordinary that a famous Ranco control offers dependable, accurate, trouble-free service throughout the years.

That's why servicemen make fewer call-backs, spend far less time on the job, and make more money by replacing with Ranco. Visit your Ranco wholesaler today. Select from the most complete replacement line ever offered to the trade. No longer do you have to shop all over town!

**Ranco Inc.**  
COLUMBUS 1, OHIO

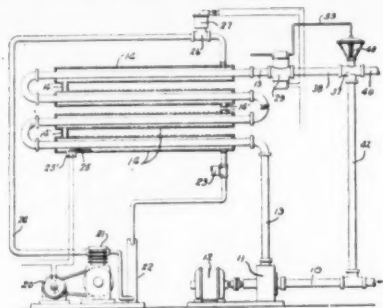
WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS



# PATENTS

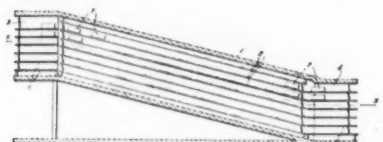
Week of June 13  
(Continued)

**2,511,582. PROCESS AND APPARATUS FOR COOLING MILK AND OTHER LIQUIDS.** George Grindrod, Oconomowoc, Wis. Application Sept. 12, 1945, Serial No. 615,823. 19 Claims. (Cl. 62-7.)



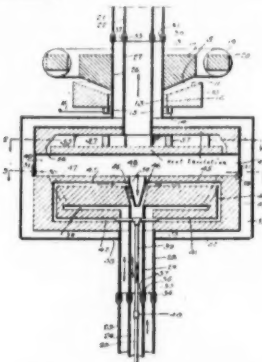
1. The process of rapidly cooling milk and other liquids to a degree slightly above their freezing point, consisting in forcing the liquid in a confined stream and at a scouring velocity in heat exchanging proximity to a flowing refrigerant having a temperature below the freezing point of said liquid and materially below the ultimate temperature to which such liquid is to be reduced, whereby to maintain a substantial temperature differential between the refrigerant and all portions of said liquid to maintain a rapid heat exchange throughout the cooling interval, and varying the rate of flow of the refrigerant in proportion to variations in the pressure and velocity of said stream as it passes out of heat exchanging proximity to the refrigerant.

**2,511,661. FREEZING TUNNEL.** Franciscus A. A. M. Allard, Bloemendaal, Netherlands, assignor to N. V. Ijsfabriek en Koelhuis IJsvries, IJmuiden, Netherlands. Application Dec. 29, 1947, Serial No. 794,306. In the Netherlands May 26, 1944. Section 1, Public Law 690, Aug. 8, 1946. Patent expires May 6, 1964. 1 Claim. (Cl. 62-114.)



A freezing tunnel comprising a horizontal platform both at the feed-end of the tunnel and at the discharge-end thereof, said discharge end being located at a lower level than said feed-end, a series of mutually parallel longitudinal cooling tubes being arranged between those edges of said platforms which face each other so as to allow the goods to be frozen to slide down under gravity over the inclined tubes from the feed-platform to the discharge-platform.

**2,511,691. CENTRIFUGAL DEHYDRATING AND COOLING SYSTEM.** Arthur Bramley, Long Branch, N. J. Application Dec. 5, 1945, Serial No. 632,825. 10 Claims. (Cl. 62-137.)

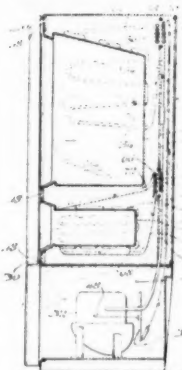


1. Steps in the method of air conditioning using a centrifuge unit having axial inlet and outlet, a distributing head, a centrifuging cell and an expansion cell, which comprise supplying raw air having moisture content to the unit at pressures above atmospheric pressure, expanding the raw air away from the axis of the unit and thereby cooling in the distributing head, supplying this cooled air to the centrifuging cell near the periphery, concentrating the heavier constituents of the air near the periphery and the lighter

constituents near the axis of the centrifuging cell, removing moisture in liquid phase from the heavier constituents at the periphery and moisture in vapor phase along with the lighter constituents at the axis of the centrifuging cell, transferring the heavier constituents in the air to the expansion cell and expanding the heavier constituents radially inwardly to discharge near the axis.

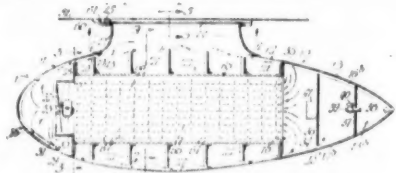
Week of June 20

**2,511,851. TWO TEMPERATURE REFRIGERATOR.** George K. Iwashita, Indianapolis, Ind., assignor, by mesne assignments, to Admiral Corp., Chicago, Ill., a corporation of Delaware. Application July 14, 1943, Serial No. 494,629. 12 Claims. (Cl. 62-95.)



1. In a refrigerator having a lower low temperature compartment and an upper higher temperature compartment, a secondary refrigerant circulating system having an evaporator portion in heat exchange relation with the upper compartment and having a condenser portion above said evaporator portion, a separate secondary refrigerant circulating system having an evaporator portion in heat exchange relation with the lower compartment and having a condenser portion above the associated evaporator portion, and a closed primary refrigerating system having an upper evaporator in heat exchange relation with the condenser of the first secondary system and a lower evaporator in heat exchange relation with the condenser of the second secondary system.

**2,511,875. METHOD OF REFRIGERATING FOOD PRODUCTS.** Harry W. Protzeller, Fairmont, Minn., assignor of one-half to Arthur Wm. Nelson, Park Ridge, Ill. Application Oct. 7, 1943, Serial No. 505,332. 13 Claims. (Cl. 62-170.)

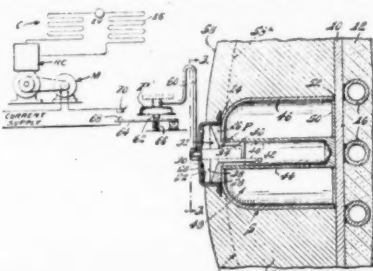


1. The process of transport refrigeration of food products which comprises conveying the food products, at high altitude where low temperatures obtain, in a closed container having an impermeable covering capable of the quick transmission of heat units therethrough, the food products in said container being in spaced relation to each other and to said covering so that an annular passage is present between the spaced food products and the covering respectively, circulating the air in the container between and about the spaced food products in one direction to absorb heat units therefrom and then through said passage in the other direction in a manner transferring said absorbed heat units to and through the covering for absorption by said low temperature external atmosphere.

**2,512,066. ICE BANK CONTROL STRUCTURE.** Joseph P. Linfor, Middlebury, Ind., assignor to Penn Electric Switch Co., Goshen, Ind., a corporation of Iowa. Application Aug. 1, 1945, Serial No. 608,322. 4 Claims. (Cl. 62-4.)

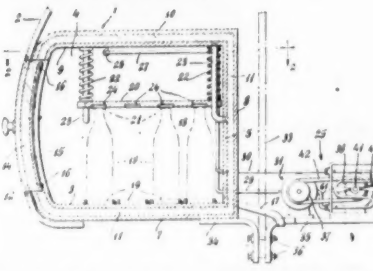
2. An ice bank control structure comprising a power element having liquid therein adapted to alternately freeze and thaw at a temperature substantially that of the freezing point of water, supporting

means for said power element in relation to a wall on which ice is formed by an evaporator, said supporting means including a heat transmitting element



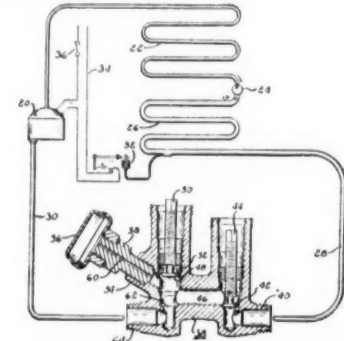
from said wall to said power element, and means for insulating said heat transmitting element with relation to the ice formed on said wall, said ice, upon attaining a predetermined thickness, contacting said power element.

**2,512,077. MIDGET REFRIGERATOR.** Stanley F. Walker, Montgomery, Ala. Application Jan. 16, 1947, Serial No. 722,317. 2 Claims. (Cl. 62-116.)



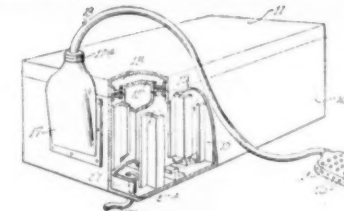
1. A device of the character described comprising a food compartment which consists of heat and cold insulated side, rear, top and bottom walls and which is adapted to be mounted into a cabinet and closed by the door of the cabinet, heat and cold insulation being mounted upon the inner side of said door in such a manner as to extend into said compartment when the door is closed, a coiled cooling tubing being extended into said compartment, spring biased means for holding in place rows of bottles arranged alongside the rear and side walls of the compartment being provided therein, a compressor adapted for forcing a cooling medium through said tubing and through an expansion device as well as through a condenser being located outside of said compartment, and a motor driving said compressor and having fan blades on its shaft for forcing air through said condenser being juxtaposed to said compressor outside of the compartment, said compressor and said condenser being connected to said coiled tubing by means of tubes which are extended into said compartment.

**2,512,090. REFRIGERATING APPARATUS.** Lonzo S. Cooper, Piqua, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application June 5, 1946, Serial No. 674,530. 4 Claims. (Cl. 62-115.)



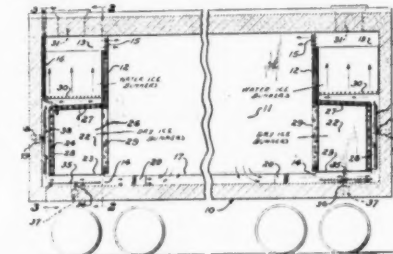
1. The method of adding a specifically desired quantity of liquid to a compression refrigeration system which includes first sealing a point of connection on the suction line between the evaporator and the compressor from the remainder of the system, and secondly connecting a container containing a measured body of said liquid to said point of connection, then establishing communication between the suction side of said compressor and the body of said liquid, starting said compressor and throttling the flow of liquid into said system and continuing the operation of the compressor and the throttled flow of liquid until essentially the entire measured body of liquid is drawn into the system, then sealing the point of connection from the remainder of the system, sealing the point of connection from the atmosphere and opening the thus sealed point of connection to the remainder of the system.

**2,512,198. AIR COOLER.** Mead B. Davidson, Dallas, Tex. Application June 17, 1946, Serial No. 677,255. 1 Claim. (Cl. 62-134.)



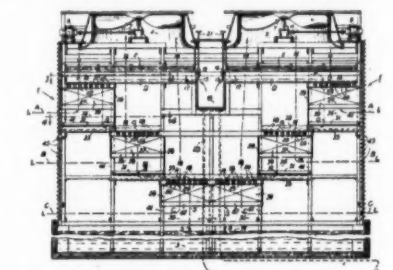
In an air conditioning unit for vehicles, the combination comprising a box having an insulated and removable top, a fan mounted over an opening in one end of said box for forcing air therethrough, an ice compartment within said box, vertically and horizontally staggered baffle plates mounted between the walls and bottom of said box and ice compartment to hold the walls of the latter in spaced relationship with those of said box and for constraining air passing therethrough to travel in a circuitous course to prolong the cooling period of said air, an air outlet in the end of said box opposite said fan, a flexible hose connected to said outlet at one end and means at the other end of said hose for diffusing said air and a common means for draining said unit interiorly and exteriorly of said ice chamber.

**2,512,437. REFRIGERATOR CAR AND METHOD OF REFRIGERATION.** Robert D. Pike, Pittsburgh, Pa. Application April 8, 1947, Serial No. 740,117. 7 Claims. (Cl. 62-91.5.)



1. A refrigerator comprising a storage compartment; walls forming an air cooling chamber having spaced openings into the compartment to provide an air circulation system through the compartment and chamber; a Dry Ice bunker in the lower portion of the chamber, said bunker having a bottom wall for supporting Dry Ice and forming a heat conductor between air passing therealong and the Dry Ice; an air pervious water ice support in said chamber above the bunker; and means for circulating air from the compartment into the bottom of the chamber and upwardly through the chamber and into the compartment.

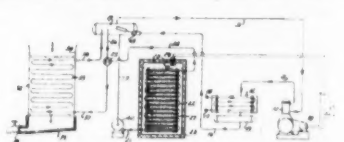
**2,512,471. WATER-COOLING TOWER.** Nathaniel P. Green, University City, Mo. Application Dec. 26, 1947, Serial No. 793,857. 2 Claims. (Cl. 261-111.)



1. A cooling tower comprising a vertical stack having a common vertical side air inlet and a common horizontal upper air outlet, a series of heat-exchange boxes

each consisting of imperforate L-shaped baffle elements arranged in diagonal stepped relation from an upper part of the stack adjacent the air inlet and air outlet to a lower part of the stack distant from the air inlet and air outlet peripherally enclosed filling baffles respectively horizontally arranged crosswise in the upper portion of each box, the bottom of each box forming a water collecting basin spaced from the respective filling baffle so as to provide an individual box inlet directed toward said vertical air inlet, each successive downward box inlet being farther from the common air inlet, means for introducing all the water to be cooled into the filling baffles of the uppermost box for progress to its basin, means for transferring all of the water from said basin to the filling baffles of successively lower boxes, whereby all the water passes serially through the filling baffles and basins of all stepped boxes and the air entering said vertical inlet is divided between said respective box inlets, each divided portion of air being deflected by a respective L-shaped baffle element into respective upward counterflow relationship with all of the water which passes through the respective box.

**2,512,576. REFRIGERATING METHOD AND APPARATUS.** Joseph A. Cross, Westerville, Ohio, assignor to Mojonner Bros. Co., Inc., Chicago, Ill., a corporation of Illinois. Application Oct. 29, 1947, Serial No. 782,926. 12 Claims. (Cl. 62-115.)



12. A method of storing and utilizing refrigeration comprising circulating refrigerant in the low pressure side of a refrigeration system through coils in a water containing chamber for freezing ice therein during periods of low refrigeration demand, and during periods of high refrigeration demand circulating the refrigerant on the low pressure side of the system both through said coils and through a direct expansion cooler thereby transferring to the ice a portion of the heat acquired by the refrigerant in its passage through said cooler.

(To Be Continued)

## CLASSIFIED ADVERTISING

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### POSITIONS WANTED

EXECUTIVE—16 years engineering and manufacturing experience in the household appliance field. Seasoned in product design and development, production engineering, plant engineering, industrial engineering, welding engineering, metal finishing, factory cost control, sales engineering, purchasing and personnel. Detailed in Army and Navy ordnance procedures and specifications. Good leadership, good imagination, and a great deal of initiative. Present salary five figures plus. Will review combination salary and profit sharing arrangement. BOX 3632, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

ENGINEERS FOR product design engineering department of refrigerator and freezer manufacturer. Good opportunities with expanding organization for engineers with various interests and amounts of training and experience in product development, design and testing in this field. Reply General Manager, AMANA REFRIGERATION, INC., Amara, Iowa. Replies will be held confidential.

SALES MANAGER qualified to handle our retail Iowa sales, also supervising and training salesmen. C. L. PERCIVAL COMPANY, Boone, Iowa.

PROMINENT MANUFACTURER of commercial refrigeration and air conditioning equipment needs salesmen to travel, contacting distributors and promoting sales in territory. Must have working knowledge of refrigeration and air conditioning. Give full details of qualifications, references and experience in first letter. Write BOX 3625, Air Conditioning & Refrigeration News.

MANUFACTURER'S REPRESENTATIVES wanted by middle west manufacturer. Complete line of refrigerated store fixtures, including latest design self-service models for supermarkets. Contact dealers, distributors and chains. Our sales program for 1951 provides for the establishment of representatives in several desirable territories in United States. Have very attractive proposal. BOX 3629, Air Conditioning & Refrigeration News.

WE ARE looking for manufacturers' agents selling in the states of Oregon, Washington, Idaho, Montana, Wyoming, North Dakota and South Dakota. We offer four commercial refrigeration specialties for direct sale from factory to retailer. These include an ice-cube maker, a flake ice machine, a refrigerated soft drink dispenser, an exclusive type of self-contained room cooler. If interested in handling these products, write advising territory you now cover and what lines you now handle. BOX 3633, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

WHOLESALE SEALED unit rebuilding. We will rebuild and convert your unit to "Freon-12." One year guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Mich.

SURPLUS SALE. New refrigeration equipment. 1500-1/2" flare brass compressor valves, oval flanged, 2 bolt type, 1 1/2" B.C., \$3.50 ea. 350-5" x 28" liquid receivers with valves, \$6.00 ea. 100-1 HP prominent brand air cooled condensers, \$20.00 ea. 30-2 HP prominent brand air cooled condensers, \$38.00 ea. 50-1 to 1 1/2 HP compressor bodies with flywheels and valves, \$50.00 ea. 500-2 HP compressor bodies with flywheels and valves, \$65.00 ea. AIRCRAFT PRODUCTION ENGINEERS, 1834-42 W. 59th St., Chicago 36, Ill. Phone: Hemlock 4-0500.

COMPRESSOR BODIES, brand new; model #19, good up to 1-HP. @ \$45. each; includes flywheel and one service valve. Write for circular. MANN REFRIGERATION SUPPLY CO., 15 Astor Place, NYC. GRamercy 3-8000.

1/2-HP. open type units "F-12," complete with 1/2-HP standard brand motors, less receivers; brand new in original crates; specially priced at \$41.95 each. NEW YORK REFRIGERATION CO., 35 East Fourth Street, New York 3, N. Y.

### BUSINESS OPPORTUNITIES

ENGLISH MANUFACTURERS of domestic refrigerators either complete or hermetic and absorption type units and evaporators separately for local assembly, wishes to contact lively agents in all U.S.A. states. Make use of devaluation while it lasts. Airmail at once for free lists and particulars. LONGFORD ENGINEERING CO., LTD., Dept. A.C., Bognor, Regis, Sussex, England.

FOR SALE: Commercial refrigeration and electrical business in northern California. Lines include store fixtures, stock, and equipment. A good business. Write P. O. Box 461, Dinuba, California.

FOR SALE—Because of ill health will sell for inventory one of the largest store fixture and appliance businesses in Middle West. Located in Indiana. Our business last year grossed \$260,000.00 and we paid net income tax of \$18,837.63. This year of 1950 our gross will show \$350,000.00 and we should show net profit \$25,000.00 and be forced to pay tax on this figure. We operate six brand new trucks, have large four-story modern fireproof building under lease with 16,000 sq. ft. floor space. Modern elevator 18 ft. long lifts 8,000 lbs., makes the building the most ideal type for this kind of operation. We have the best lines to sell, the best sales and service organization in this part of the country. Will sell business for inventory only at invoice prices. If interested write BOX 3597, Air Conditioning & Refrigeration News.

FOR SALE: on account of ill health and doctor's order. Leading commercial refrigeration, heating and air conditioning business in North Texas. Good clean stock, no junk. Taxable net this year over \$25,000.00. Dealer & distributor set up on exclusive franchises. Well established and inventory large enough on hand to assure good profit next 12 months or more. Excellent equipment and personnel. Own building, will sell or lease. Can arrange terms. BOX 3631, Air Conditioning & Refrigeration News.

### MISCELLANEOUS

NORGE SEALED units remanufactured and exchanged. Immediate delivery from stock, 1 year warranty. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Complete set of three, \$1.45 plus postage. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Michigan.

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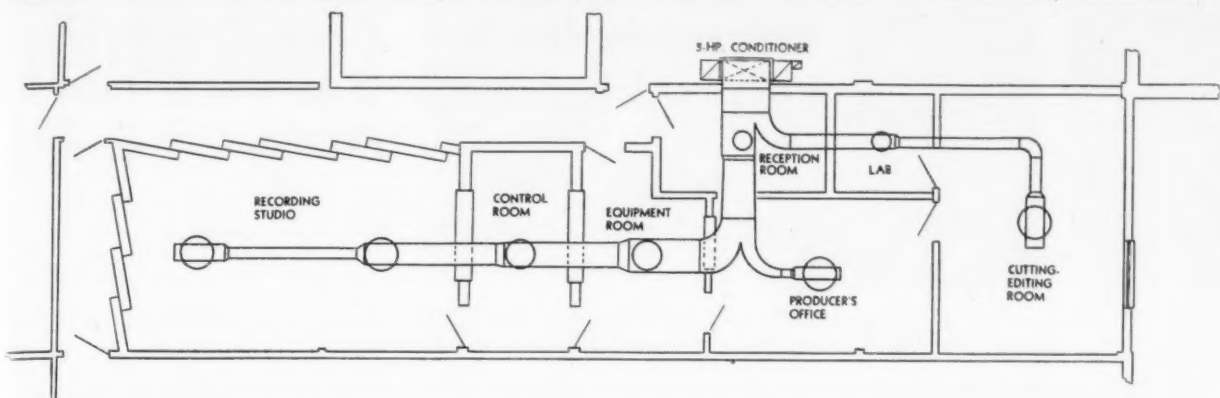
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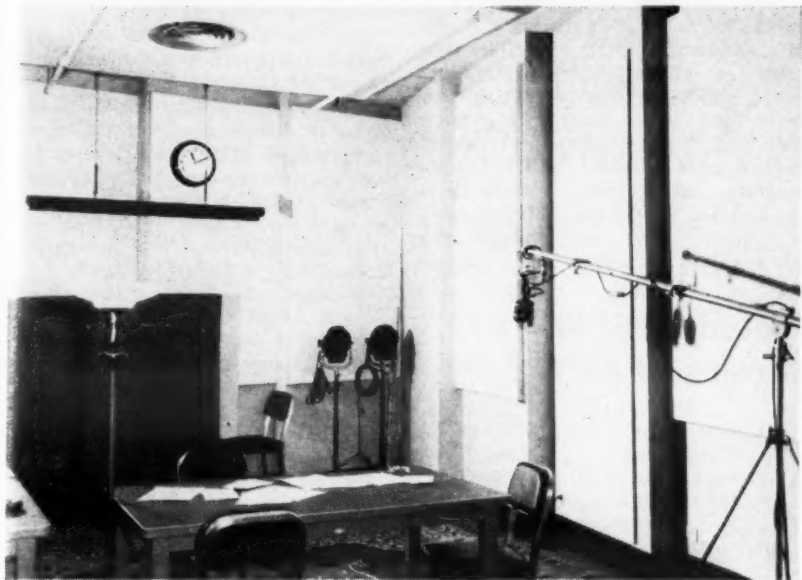
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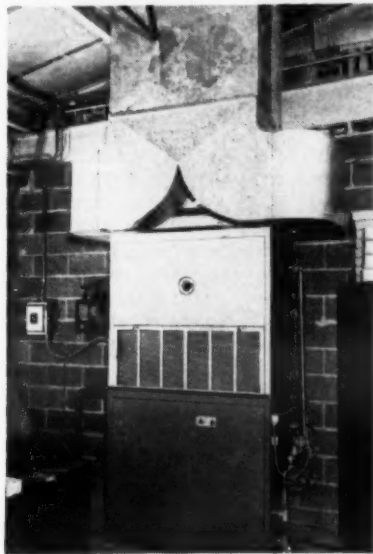
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DRAWING OF STUDIO shows how 5-hp. air conditioner supplies all the various sections of the Soundfilm Studios, Inc., by means of eight Type AC Anemostat diffusers which combine supply and return air for the soundproof rooms.



NO WINDOWS in recording room (and only one in the entire studio) made air conditioning a must, yet installing it was a problem.



AIR CONDITIONER, located outside studio, helped solve noise problem.

## The Job of Providing 'Quiet Cooling'

Movie Firm's Windowless Recording Studio Next to Noisy Plant Needed Conditioning, But How Could It Be Done?

DETROIT—The mushrooming television industry, which has already made a considerable impact on American home life, has created new demands for films, particularly for "commercials."

Partly to meet this new market, Soundfilm Studios, Inc., went into business recently here, manned by executives and producers brought in from Hollywood and New York City. This also meant an exacting air conditioning installation.

Sound control is extremely important in any recording studio. This was especially true for Soundfilm Studios, which is located on the second floor of a factory building.

Because of the noise and rumbles from the factory machinery, as well as trucks and trains, the studio itself is acoustically isolated from the rest of the building. This requirement also prevents the use of windows for ventilation and lighting. There is one window in the seven rooms housing the operation, but this is in the film cutting and editing room where sound control is not so important.

With no windows, air conditioning is a must. The year-round system for this job, which was installed by Charles R. Beltz & Co., Airtemp distributor, must likewise be quiet, for if it should introduce noise to the studios the whole effect of sound isolation would be useless.

Two walls of the recording studio proper, for example, are of sawtooth construction with the interior sides covered with acoustic tile. The latter is also used on the other walls and ceilings, the aim being to eliminate noise penetration but not to deaden the room so completely that all life is lost from the actors' voices during recording.

In laying out the air conditioning system, it was obvious that the logical location for the 5-ton package conditioner (an Airtemp 5-SCA model) was outside the studio rooms so that this possible source of noise would be eliminated. But this brought up the problem of getting the air to and from the conditioned area without transmitting any noise through the ducts or creating any noise in the ducts themselves due to air movement.

### ROOF MAY SOLVE PROBLEM, BUT HOW ABOUT AIRPLANES?

After pondering over the problem, the Beltz organization suggested that the main supply and returns be carried across the roof.

"But," countered the studio execu-

tive, "suppose an airplane flies overhead while we're recording. Won't the ducts on the roof pick up the sound?"

There was considerable likelihood that they would, the contractor admitted, but since the roof layout was most practical otherwise, the contractor suggested a method to get around this problem.

After the supply and return ducts were in place, a wooden form was to be built around them on the roof, allowing at least 4 in. clearance on all sides, except for the take-offs to the individual room outlets, where a minimum of 8 in. clearance was specified.

The space between the ducts and the form was then to be filled with loose rock wool, providing both thermal and acoustical insulation, the form covered, painted, and weather-proofed.

There has been no noise trouble from airplanes, or even flying saucers.

This was a major problem in sound control, but there were others. To eliminate duct noise, the ducts were lined with 1-in. thick fiberglass, which serves also as thermal insulation.

Here the contractor points out that contrary to what one might ordinarily expect, air velocity should be increased by using smaller ducts to permit more effective sound absorption. With smaller ducts and increased velocity, what sound there is echoes back and forth against the walls of the duct at a much greater rate, thus giving the fiberglass lining more opportunities to absorb the

echoing sound waves.

The installation employs eight Type AC Anemostat diffusers which combine supply and return air. Conditioned air is supplied to the rooms around the outer section of the diffusers, return air going up through the center section. Return air ducts, which are the same size as the supply lines, are located directly above the supply ducts.

### DATA ON DUCT LAYOUT

There is a 44 by 12-in. riser coming up from the conditioner and over the roof. Above the reception room a 15 by 10-in. branch runs to the small photo laboratory, fed by a No. 20 Anemostat. The branch continues as a 12 by 10-in. duct, being enlarged to 18 by 8 in. to feed into a No. 35 diffuser in the ceiling of the cutting and editing room.

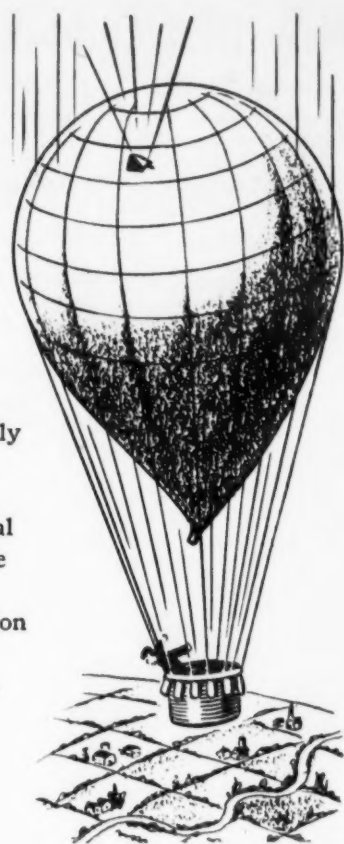
Coming out of the main duct over the reception room is a 30 by 12 in. duct supplying the No. 20 outlet for the reception room. This transitions to 28 by 12 in. and then splits into a 9 by 10-in. branch for the No. 30 diffuser in the producer's office and a 30 by 10-in. duct. The latter supplies a No. 25 outlet in a small equipment room, another No. 25 Anemostat in the studio control room, and two No. 30 diffusers in the recording studio itself, duct size diminishing, of course, after each outlet.

To bring return air into the plenum of the 5-hp. package conditioner, 18 by 7-in. return ducts come into each side of the unit. There is also an 8 by 8-in. fresh air duct running to the unit from the roof overhead.

## PRESSURE DROP

*is important*

Excessive pressure drop through a poorly designed heat interchanger can offset all the gain to a system and do more harm than good. Exclusive longitudinal fins in all Heat-X interchangers provide for low pressure drop and high heat transfer, resulting in improved expansion valve performance, lessening of oil foaming troubles, and many other advantages contributing to a more efficient installation.



## heat-x HEAT INTERCHANGERS



1/4 to 10 TON interchangers are of the cast aluminum type with highly efficient longitudinal suction-line fins. Sized to match condensing units.

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- ✓ Streamline heavily insulated all steel cabinets.
- ✓ Stainless steel Lift-A-Way doors with roller bearings—"No busted fingers."
- ✓ Flush bottle decappers.
- ✓ More capacity per cubic foot.

"SELL **United** AND YOU SELL THE FINEST"

• DIRECT DRAW SYSTEMS • BOTTLE COOLERS



## New NPA Cutbacks--

(Concluded from Page 1, Column 4) quarterly rate of 80% of the production or use during the first six months of 1950. Use of zinc products in any single month during a calendar quarter may not exceed 40% of the total permitted for the quarter.

Exempted from limitation provisions of the order are those who are less than 3,000 pounds of zinc or zinc products quarterly. Also exempt are certain highly-specialized uses of zinc as well as use of zinc for electroplating where it replaces cadmium. The order also limits inventories.

With direct defense and defense-supporting programs requiring increasing quantities of steel, the NPA indicated to steel products industry representatives that it may order cutbacks in use of the metal in many non-essential civilian products. Conferences with steel product manufacturers are expected to be held to work out agreement on the types of steel items on which production may be slashed sharply or discontinued.

Meanwhile, recent increases in steel prices averaging 5½% were seen as almost certain to cause an increase in appliance prices.

In a recent article on the government's defense program, *The Wall Street Journal* predicted that the reductions in civilian use of scarce metals "are going to be deeper than anything yet announced." The newspaper quoted NPA officials as insisting that the cutbacks they've ordered so far don't reflect President Truman's present program.

These officials pointed out that present orders are based only upon the \$25 billion of goods and services which Congress has authorized the Pentagon to order in the 12 months ending next June. The President recently asked Congress to raise this limit by about \$18 billion, and still another boost is expected.

## Demand Wage Boosts for 300,000 UE Workers

MILWAUKEE—Immediate "substantial wage increases" have been demanded for the 300,000 C.I.O. International Union of Electrical, Radio, and Machine Workers without regard to opening provisions of labor contracts, which would normally call for later wage discussions. The demand was made in a resolution passed at the second annual convention attended by 700 delegates here.

The union pointed out that recent wage boosts in other industries and rising cost of living, make this adjustment necessary.

The union contends that the raise could be granted without any price increases. It further pointed out that failure to grant pay rises would endanger the industry's ability to do its part in the present crisis.

## NARDA Meeting Speakers--

(Concluded from Page 1, Column 3) Zenith Radio Corp.; Dodge Barnum, president of Domestic Sewing Machine Co.; and Earl Lifshy, managing editor of *Retailing Daily*.

Several dealers will tell how they operate their own businesses. They include Harry B. Price, Jr., Norfolk, Va.; Mort F. Farr, Upper Darby, Pa.; Herb Names, Denver; James Lee Pryor, Wilmington, Del.; Francis L. Monette, Lowell, Mass.; Lyle W. White, Lansing, Mich.; Al Robertson, Oklahoma City; and Ted Simmons, Hartford, Conn.

Each panel discussion and talk will be devoted to a specific problem affecting the dealer. Among the topics to be covered are inventory control, credit and installment sales, demonstration, franchises, pricing, book-keeping and auditing, advertising and promotion, and general industry trends.

All panel and speech sessions will be held in the Stevens' grand ballroom. The service equipment show will be conducted in the adjoining Normandy Lounge overlooking the main lobby.

All appliance-radio-TV dealers are invited to attend the meeting, whether members of NARDA or not. Those planning to do so are urged to make reservations immediately.

The meeting which will get under way the evening of Jan. 14, is being held during the second week of the Homefurnishings Market. This timing was planned so dealers will have an opportunity to visit both the Merchandise and American Furniture marts to see the new 1951 products on display there.

## Licensing of Servicemen Planned In Mich. City

PORT HURON, Mich.—Licensing and regulation of local refrigeration and other servicemen is planned by the city commission.

Automobile mechanics and radio and television repair men also would be affected by the proposed measure. The proposal was introduced by Commissioner Thomas E. Woods, who charged that present practices in these fields "border on exploitation" in many cases.

Under the proposed measure, servicemen would be regulated in much the same way as are electricians and plumbers.



A. P. LIVAR



R. D. JACOBS

## Warren Appointments--

(Concluded from Page 1, Column 2) division of Chrysler Corp. as chief engineer. He became Airtemp's director of engineering and research in 1940.

More recently, Livar has served as executive vice president, American Transformer Co., Newark, N. J.; assistant to the president, Claude Neon, Inc., New York City; chairman of the board, Securities Corporation General, New York City; and president of Livar Products Corp., New York, a refrigeration and air conditioning development company.

Jacobs, who has played a significant part in over-all Warren management for a number of years, joined the company in 1928. He has worked in almost every department of the company: stenographic, purchasing, collection, legal, financing. At one time he had the Warren dealership in Macon, Ga.

Jacobs was elected to the board of directors in 1945, and at the same time was appointed secretary of the firm. In addition to his duties as secretary, he was in charge of credits and collections.

## Universal Sales Plan To Stress Best-Selling Items

NEW BRITAIN, Conn.—Landers, Frary, & Clark will concentrate its 1951 line of housewares on 11 best sellers which will be sold at higher prices and backed by a 25% increase in national advertising, it was reported recently.

The concentration was decided upon, it was said, because materials shortages will necessitate a production cut of about 25%. The new price schedule on the 1951 line, to take effect on Jan. 1, follows:

Coffeematic \$29.95, toaster \$22.95, Cook-O-Matic \$34.95, Stroke Saver iron \$13.95, non-automatic waffle iron and sandwich grill combination \$16.95, Mixablend \$37.95, standard heating pad \$8.95, deluxe heating pad model 7401 \$9.95, food mixer with juicer and food chopper attachment \$46.50, table stove \$19.95 (unchanged), and electric blankets—twin bed \$42.95, double bed with single control \$44.95, and double bed with dual control \$54.95.

## Magnetic Door Will Be Discontinued by G-E

BRIDGEPORT, Conn.—When its stock of alnico magnets is exhausted, the General Electric Co. will no longer make a magnetic door refrigerator, H. L. Andrews, vice president of the appliance and merchandise department, declared recently.

The supply is expected to hold out until about March 1. From then on, G-E will use the latch type door.

## Korean Reverses Cut Opposition to Strict FRB Credit Policies

WASHINGTON, D. C.—The recent reverses in Korea have taken a good deal of the "zip" out of opposition to the strict consumer credit policies of the Federal Reserve Board.

Senator Burnet R. Maybank, chairman of House-Senate Defense Production Act "watchdog" committee, indicated that some automobile industry organizations that had been attacking Regulation W bitterly declined to testify at hearings held on the regulation last week.

In New York City, it was learned that one appliance manufacturer declined to attend a meeting there to work out strategy to get the Federal Reserve Board to relax its curbs.

Credit officials of the company said one reason for not attending was a feeling that in view of the Korean situation no action should be taken that would impede the government's home front program.

Federal Reserve Board figures issued recently noted that consumer installment credit rose only \$42,000,000 in October, the smallest increase for the corresponding month in any postwar year except 1949. Total installment credit outstanding at the end of October was \$13,379,000,000.

## Det. Lubricator Names Robbins

DETROIT — Detroit Lubricator Co.'s appointment of John C. Robbins as factory manager has been announced.

### FOR BETTER PERFORMANCE

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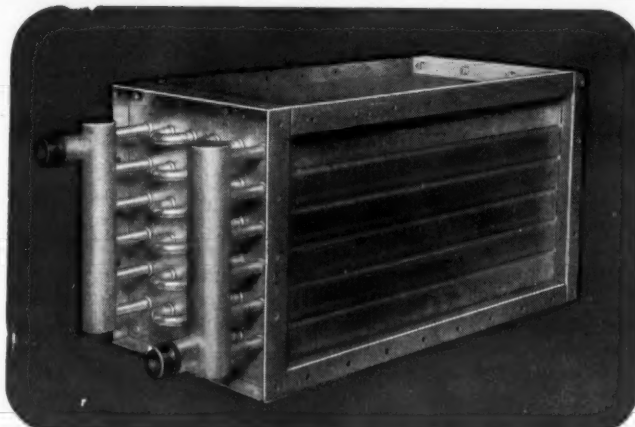
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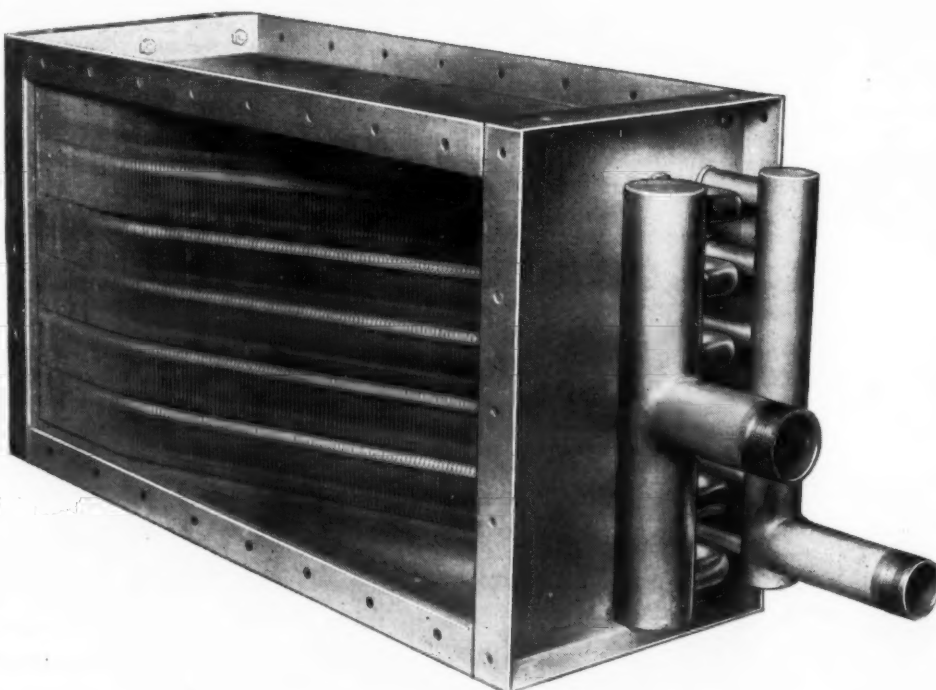


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Supplied in standardized and matched sizes, singly or in combination. Can be arranged to fit almost any installation.



**BUSH DX COILS** These are constructed of aluminum fin and tinned copper tube with aluminum top and bottom plates furnished on all coils.

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### BUSH STEAM COILS

Trouble-free service and top efficiency are yours with BUSH Standard Steam Heating Coils. They're available in six standard finned heights and variable finned lengths, with casings to match the corresponding direct expansion coils. The cores are of high quality non-ferrous materials; the steel and aluminum casings are protected with zinc or lead coatings, plus a priming coat for extra protection. And they're carefully tested and accurately rated.

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